

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII**

In the Matter of the Application of)
HAWAII ELECTRIC LIGHT COMPANY, INC.)
For Approval of Rate Increases and)
Revised Rate Schedules and Rules.)
_____)

Docket No. 05-0315

**RESPONSES TO
CONSUMER ADVOCATE
INFORMATION REQUESTS**

BOOK 5 OF 7

January 12, 2007

CA-IR-281

Ref: HELCO-WP-1305a/b and Responses to CA-IR-176 and CA-IR-173, Deferred Tax Reserve Items Not Included in Rate Base.

Please explain the rationale behind HELCO's exclusion of each of the following deferred tax reserve line items, indicating where the related balance sheet asset/liability amounts are reflected in HELCO's asserted rate base:

- a. AFUDC in CWIP;
- b. TCI in CWIP;
- c. 28359 Workers Comp;
- d. 28363 Vacation Accrual;
- e. 28369 Accidents;
- f. 28375 Auto Liability; and
- g. 28307 TIP.

HELCO Response:

The related balance sheet asset and liability accounts were provided in the Company's response to CA-IR-176, page 2. The rationale for excluding each item from the deferred tax reserve is detailed below:

- a. Construction work-in-progress (CWIP) is excluded from rate base. Therefore, the deferred taxes related to AFUDC in CWIP and not yet closed to plant are similarly excluded from rate base.
- b. Tax capitalized interest (TCI) is the tax equivalent of AFUDC. Please refer to AFUDC in CWIP explanation above.
- c. Workers' compensation liability balance is excluded from rate base. Correspondingly, the deferred taxes related to the workers' compensation liability are also excluded from rate base.
- d. In Docket No. 6999, D&O 11893, the PUC ruled that HELCO's cost of service may include only vacation paid during the year. For tax purposes, an accelerated deduction is allowed for the vacation taken between January 1st and March 15th of the subsequent year. Both the

regulatory asset – vacation liability and the accrued vacation liability (accounts combined net to zero) are excluded from rate base.

- e. The Accidents balance is excluded from rate base; deferred taxes related to accidents are also excluded from rate base.
- f. General and auto liability balance is excluded from rate base; deferred taxes related to general and auto liability are also excluded from rate base.
- g. The team incentive plan (TIP) liability balance is excluded from rate base; deferred taxes related to the TIP liability are also excluded from rate base. In Docket No. 6432, the Commission disallowed expenditures for bonuses and incentives (D&O No. 10993, March 6, 1991).

Please note that the deferred tax reserve related to rate case costs should remain excluded as presented in HELCO-WP-1305a and HELCO-WP-1305b. Comment (F) at page 2 of our response to CA-IR-176 is incorrect. Unamortized rate case costs are not included in rate base. Correspondingly, the deferred taxes related to the unamortized rate case costs are also excluded from rate base.

CA-IR-282

Ref: HELCO Response to CA-IR-175, Deferred Tax Expense Calculation.

Please provide a statement of assumptions and detailed supporting calculations for each of the amounts appearing in the "Base" column on page 2.

HELCO Response:

The requested information is provided in the attached summary on page 2. The workpapers supporting the detailed calculations are voluminous and are available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the requested information.

Please note that the "HELCO Tax Dept." workpaper reference (listed on page 2) is shown at the bottom right hand corner of each page. The workpapers have been sorted by these reference numbers.

Hawaii Electric Light Company
Calculation of Deferred Tax Liability
For Rate Case Test Year 2006

Temporary Difference	HELCO Tax Dept. w/p Reference	Base	LIABILITY DR/(CR)	
			Federal Deferred Tax	State Deferred Tax
State Tax Basis SL Depn	305	27,346,693	8,995,623	1,644,814
State Tax Depn	305	(28,278,611)	(9,302,175)	(1,700,969)
State Tax Basis SL Depn	305	(27,346,693)	(9,571,343)	
Federal Tax Basis SL Depn	305	27,345,287	9,570,850	
State Tax Depn	305	28,278,611	9,897,514	
Federal Tax Depn	305	(27,011,487)	(9,454,020)	
Book Post-Norm Depn On Capt OHs	120	58,677	19,302	3,528
Tax Depn On CIAC - Fed	305	(2,783,365)	(915,581)	
Tax Depn On CIAC - State	305	(2,910,587)		(175,073)
Tax Depn On Capt Interest - Fed	305	(1,382,292)	(454,701)	
Tax Depn On Capt Interest - State	305	(1,412,994)		(84,992)
Non Utility Depn	305c	43,201	14,211	2,599
Capitalized Interest	217	251,468	82,720	15,126
CIAC Received	202	174,280	57,329	10,483
CA Received	203	1,080,009	355,266	64,963
CA Refunds	203	(416,413)	(136,978)	(25,047)
General Liability Reserve	204	(398,400)	(131,053)	(23,964)
Workers Comp	205	393,558	129,460	23,673
Auto Liability	204	(27,966)	(9,199)	(1,682)
Bad Debt	206	67,264	22,126	4,046
Rate Case	207	(312,500)	(102,796)	(18,797)
IRP	208	0	0	0
DSM	213	367,070	120,747	22,079
Cost of Removal	305	(866,794)	(285,130)	(52,138)
G/L On (M)ACRS/CIAC Retires-Fed	305	(339,949)	(111,825)	
G/L On (M)ACRS/CIAC Retires-State	305	(339,965)		(20,449)
Pension - Qualified	218	2,686,000	883,553	161,564
SERP - Nonqualified Pension	218	(6,500)	(2,138)	(391)
Post Retirement Benefits	219	228,500	75,164	13,744
OPEB Executive Life	219a	(15,364)	(5,054)	(924)
Book Depn Flow-thru	231	85,100	27,993	5,119
Book Depn AFUDC	231	196,356	64,591	11,811
Book Depn CWIP Equity Transition	233	8,879	2,921	534
Book Depn CWIP Equity On-Going	234	614,093	202,004	36,938
Book Depn CWIP Debt Transition	235	1,279	421	77
Book Depn CWIP Debt On-Going	236	325,755	107,156	19,594
Reg Asset Amort Flowthru	231	54,202	17,830	3,260
Reg Asset Amort AFUDC	231	125,063	41,139	7,523
Reg Asset Amort CWIP Equity Transition	233	5,655	1,860	340
Reg Asset Amort CWIP Equity On-Going	234	392,769	129,200	23,625
Reg Liab Amort ITC	212	(119,813)	(39,412)	(7,207)
Amort ITC	212	(188,112)	(61,879)	(11,315)
CWIP Equity	201	(282,132)	(92,807)	(16,970)
CWIP Debt	201	(135,079)	(44,434)	(8,125)
AFUDC Equity Gross-up	201	(179,698)	(59,111)	(10,809)
Software	209	36,339	11,954	2,186
Prepaid Ellipse Relicensing Fee	209	30,936	10,176	1,861
Amort of Bond Issuance Exp	210	18,636	6,130	1,121
Amort of RB Interest Diff	214	(18,202)	(5,987)	(1,095)
Amort of RB Redemption Premiums	216	72,827	23,956	4,381
Reg Liab Amort Excess - Depn	221	(103,277)	(33,973)	(6,212)
Reg Liab Amort Excess - Other	222	(1,408)	(463)	(85)
Reg Asset Amort Deficit - Depn	220	21,761	7,158	1,309
Reg Asset Amort Deficit - Other	223	(15,564)	(5,120)	(936)
State ITC (gross)	211	479,406	157,699	28,836
Federal Subtotal		560,055	210,874	
State Subtotal		(863,603)		(51,945)
IRS Depreciation Adjustments	CA-IR-283		335,000	65,000
TOTALS			545,874	13,055

The requested information is voluminous, and is available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the requested information.

CA-IR-283

Ref: HELCO Response to CA-IR-175, Deferred Tax Expense Calculation – IRS Depreciation Adjustments.

Please provide a detailed explanation of the \$335,000 and \$65,000 amounts appearing at the bottom of page 2 and provide complete copies of all documents associated with these amounts, including but not limited to reports and correspondence with the Internal Revenue Service in connection with such amounts.

HELCO Response:

In 2006, the Company settled its outstanding 1992-1996 amended return claims and previously disagreed issues in Revenue Agent Review (RAR) 1997 – 1999 and 2000-2002. The \$335,000 and \$65,000 represents the federal and state deferred tax benefit associated with the adjustments to the temporary differences generated by the settlement with the Appeals Division of the IRS.

Confidential Information Deleted
Pursuant to Protective Order No. 22593.

The requested information is confidential and will be provided pursuant to Protective Order No. 22593, dated June 30, 2006. Because the requested information is voluminous, it is available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the requested information.

CA-IR-284

Ref: HELCO Response to CA-IR-178, American Jobs Creation Act of 2004.

According to the response at page 2, "As stated above, the final regulations do not include express language detailing how to allocate the gross receipts between DPGR and non-DPGR activities, but merely states that taxpayers must use a 'reasonable method' based on all 'facts and circumstances.' Although HELCO is awaiting more guidance from the IRS regarding the allocation between DPGR and non-DPGR revenue and expenses, we have attached our best estimate of the potential stand alone benefit." Please respond to the following:

- a. State whether and when HELCO anticipates the publication by the Treasury Department or IRS of the "express language" that is referenced, even though "final regulations" were issued in May 2006.
- b. State whether HELCO is recording on its books any estimated income tax savings arising from the American Jobs Creation Act of 2004.
- c. If your response to part (b) of this information request is affirmative, provide calculations supporting the amounts being recorded on the books in 2006, to-date.
- d. Does HELCO believe that the estimated income tax savings set forth in page 3 of the response are based upon a "reasonable method," as that term is used in your response to CA-IR-178?
- e. If your response to part (d) of this information request is negative, please identify and describe each known deficiency in the Company's page 3 calculation methods.
- f. Explain why HELCO used the 2006 credit rate of 3% in its page 3 calculations, when the ongoing rate while new electricity rates are effective in 2007 through 2009 is 6%, rising to 9% thereafter.
- g. Is it the Company's belief that known changes in income tax regulations that are effective one day beyond the end of the 2006 test period should not be considered for ratemaking purposes in this docket?

HELCO Response:

- a. The Company is not aware if and when Treasury or the IRS will issue further guidance.
- b. No, the Company has not recorded a tax benefit relating to the domestic production activities deduction as enacted under the American Jobs Creation Act of 2004.
- c. Not applicable.
- d. Yes. Treas. Reg. §1.199-1(d)(1) provides that a taxpayer that derives gross receipts that are DPGR and non-DPGR must use any reasonable method to allocate such gross receipts. The allocation method must be satisfactory to the Secretary based on all of the facts and

circumstances and must accurately identify gross receipts that constitute DPGR and non-DPGR. Treas. Reg. §1.199-1(d)(2) discusses numerous factors that will be taken into consideration by the Secretary in determining whether the taxpayer has used a reasonable method of allocation. Please refer to CA-IR-178, page 6. HECO used a similar allocation methodology in its response CA-IR-690 in Docket No. 04-0113. Based on these factors, the Company believes that it has used a reasonable method to calculate its ratemaking stand-alone benefit related to the §199 domestic production activities deduction in the 2006 test year.

- e. Not applicable.
- f. The 3% rate is applicable for the 2006 test year. Please refer to (g) below.
- g. Generally, the Consumer Advocate's position has been to exclude from test year revenue requirement known changes that occur beyond the test period. The Company believes that there may be certain situations when it would be appropriate to include in the test year revenue requirement (usually on a normalized basis) known and measurable changes that occur beyond the test period, such as periodic activities that have historically occurred and will reoccur over time but do not happen to occur in the test period (e.g., certain generating unit overhauls). The tax change referenced above does not fit into this category. However, should this tax change be incorporated into the test year revenue requirement, other out-of-test period effects should also be included, and other items that occur during the test year (e.g., employee additions, plant additions) should be considered for full twelve-month recovery.

CA-IR-285

**Ref: HELCO Responses to CA-IR-171 and CA-IR-168, page 4, PSC Tax return
"Worthless Accounts Deduction."**

Please explain the basis for HELCO's reduction of \$344,260 to its PSC taxable Gross Income on the PSC Tax return and explain why such a deduction is not reflected in the ratemaking calculation of this tax expense in CA-IR-171.

HELCO Response:

Hawaii Revised Statutes (HRS) §239-2 provides the definition of gross income from public service company business. Accounts charged off may be deducted from PSC gross income but must be added back if collection is subsequently made. An adjustment to the PSC taxable gross income for this adjustment will be made and the PSC tax will be adjusted at the next opportunity. Similarly, the PUC fee will also be adjusted for the worthless account deduction.

Please refer to the attachments to this response.

Hawaii Electric Light Company, Inc.
Support for Public Service Company (PSC) Tax and
Public Utility Commission (PUC) Fees (REVISED)
Test Year 2006
(in 000s)

PSC Tax Calculation	At Present Rates	At Proposed Rates	References
Total Operating Revenues	324,089	354,020	HELCO-2101
Less: Bad Debt Deduction	(388)	(424)	HELCO-2101
	323,701	353,596	
PSC Tax Rate	5.885%	5.885%	HELCO-WP-1301
PSC Taxes	19,050	20,809	

PUC Fee Calculation	At Present Rates	At Proposed Rates	References
Total Operating Revenues	324,089	354,020	HELCO-2101
Less: Bad Debt Deduction	(388)	(424)	HELCO-2101
	323,701	353,596	
PUC Fees Rate	0.5%	0.5%	HELCO-WP-1301
PUC Fees	1,619	1,768	

Hawaii Revised Statutes
Title 14 TAXATION
Chapter 239 PUBLIC SERVICE COMPANY TAX LAW
Haw. Rev. Stat. § 239-2 Definitions.

§ 239-2 -- Definitions.

As used in this chapter unless otherwise required by the context:

"Carrier" means a person who engages in transportation, and does not include a person such as freight forwarder or tour packager who provides transportation by contracting with others, except to the extent that such person oneself engages in transportation.

"Contract carrier" means a person other than a public utility or taxicab which, under contracts or agreements, engages in the transportation of persons or property for compensation by land, water or air.

"Gross income" means the gross income from public service company business as follows:

- (1) Gross income from the production, conveyance, transmission, delivery or furnishing of light, power, heat, cold, water, gas or oil;
- (2) Gross income from the transportation of passengers or freight, or the conveyance or transmission of telephone or telegraph messages other than mobile telecommunications services, or the furnishing of facilities for the transmission of intelligence by electricity, by land or water or air;
 - (A) Originating and terminating within this State;
 - (B) By means of vessels or aircraft having their home port in the State and operating between ports or airports in this State, with respect to the transportation so effected; or
 - (C) By means of plant or equipment located in the State, between points in the State;
- (3) Gross income from the transportation of freight by motor carriers (other than as stated in paragraph (2)), or the conveyance or transmission of messages or intelligence through wires or cables located or partly located in the State (other than as stated in paragraph (2) or (5)); or
- (4)

CAUTION: Paragraph (4) below is applicable to gross income derived from operation as a private sewer company or private sewer facility that accrued beginning 7-1-05.

Gross income from the operation of a private sewer company or private sewer facility; or

(5) With respect to a home service provider of mobile telecommunications services, "gross income" includes charges billed for mobile telecommunications services provided by a home service provider to a customer with a place of primary use in this State when the mobile telecommunications services originate and terminate within the same state; provided that all such charges for mobile telecommunications services that are billed by or for the home service provider are deemed to be provided by the home service provider at the customer's place of primary use, regardless of where the mobile telecommunications services originate, terminate, or pass through. "Gross income" shall not include:

- (A) Any charges for or receipts from mobile telecommunications services provided to customers of the home service provider whose place of primary use is outside this State;
- (B) Any receipts of a home service provider acting as a serving carrier providing mobile telecommunications services to another home service provider's customer; and
- (C) Any receipts specifically from interstate or foreign mobile telecommunications services taxable under section 237-13(6)(E), as determined by the home service provider's books and records kept in the ordinary course of business. For the purposes of this paragraph, "customer", "home service provider", "mobile telecommunications services", "place of primary use", and "serving carrier" have the same meaning as in section 239-B. The words

"gross income" and "gross income from public service company business" shall not be construed to include dividends (as defined by section 235-1) paid by one member of an affiliated public service company group to another member of the same group; or gross income from the sale or transfer of materials or supplies, interest on loans, or the provision of engineering, construction, maintenance, or managerial services by one member of an affiliated public service company group to another member of the same group. "Affiliated public service company group" means an affiliated group of domestic corporations within the meaning of chapter 235, all of the members of which are public service companies. "Member of an affiliated public service company group" means a corporation (including the parent corporation) that is included within an affiliated public service company group. Where the transportation of passengers or property is furnished through arrangements between motor carriers, and the gross income is divided between the motor carriers, any tax imposed by this chapter shall apply to each motor carrier with respect to each motor carrier's respective portion of the proceeds. Where tourism related services are furnished through arrangements made by a travel agency or tour packager and the gross income is divided between the provider of the services on the one hand and the travel agency or tour packager on the other hand, any tax imposed by this chapter shall apply to each person with respect to each person's respective portion of the proceeds. Accounts found to be worthless and actually charged off for income tax purposes, at corresponding periods, may be deducted from gross income as specified under this chapter so far as the accounts reflect taxable sales, but shall be added to gross income when and if subsequently collected. As used in this paragraph "tourism related services" means motor carriers of passengers regulated by the public utilities commission. "Motor carrier" means a common carrier or contract carrier transporting persons or property for compensation on the public highways, other than a public utility or taxicab. The "net operating income" of a public utility subject to the tax rate imposed by section 239-5(a) is the operating revenues less the operating expenses and tax accruals, including in the computation of such revenues and expenses, debits and credits arising from equipment rents and joint facility rents. In the event that, but for this sentence, deductions could not be had for expenses of services because such services were rendered by the same person or persons constituting the public utility or could not be had for income taxes, because such taxes were levied against the person or persons constituting the public utility in the person's or their individual capacity and not as a separate entity, there nevertheless shall be allowed as deductions in computing the net operating income (A) a reasonable allowance for the value of personal services actually rendered, and (B) such proportion of the actual amount of income taxes, federal and state, as fairly represents the portion of the income so taxed which was derived from the public utility business. "Partner" means the same as in the Internal Revenue Code. "Partnership" means the same as in the Internal Revenue Code. "Ports", "airports", or "points in the State" shall be deemed to be such if they are loading, unloading, transshipment, assembly, transfer or relay points. "Public highways" has the meaning defined by section 264-1 including both state and county highways, but operation upon rails shall not be deemed transportation on the public highways. "Public service company" means a public utility, motor carrier, or contract carrier. "Public utility" has the meaning given that terms in section 269-1.

(§ 239-2 enacted by L. 1932 2nd, Act 43, § 2; R.L. 1935, § 2141; R.L. 1945, § 5672; amended by L. 1945, Act 78, § 1; R.L. 1955, § 126-2; L. Sp. 1957, Act 1, § 9(b); L. 1963, Act 147, § 2(c); L. 1977, Act 26, § 1; gen. c. 1985; L. 1986, Act 308, § 1; gen. L. 1993; L. 1997, Act 178, §§ 7, 11; L. 1998, Act 125, § 1; L. 2002, Act 209, § 4; L. 2005, Act 146, § 2.)

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CA-IR-286

Ref: HELCO Responses to CA-IR-171 and CA-IR-167, page 3, PSC Tax Return – 4.0% Tax Rate.

Please explain why HELCO calculates its PSC tax using a 4.0% fixed rate on Form U-6, while using a higher 5.885% rate for ratemaking purposes on CA-IR-171. Provides copies of documents related upon by HELCO to support the higher PSC rate if it is believed to be properly used for ratemaking purposes.

HELCO Response:

Hawaii Revised Statutes (HRS) §235-5(a) provides that the rate of the PSC tax in excess of the four percent rate is determined by the ratio of the net income of the company to its gross income. If this ratio is fifteen per cent or less, the rate of the tax in excess of the four per cent rate on gross income is 1.885 per cent. In no case is the excess rate less than 1.885 percent or more than 4.2 per cent. HELCO's net income to gross income ratio was less than 15% and therefore is subject to the minimum excess rate of 1.885%.

In 2001, an agreement was entered into by the State of Hawaii and the city and counties of Honolulu, Maui, Kauai and Hawaii. It was agreed that the public service company tax revenues would be shared with those counties that established by ordinance, an exemption from real property tax for public service companies. HRS §235-5(a) states that the revenues generated from the tax in excess of the four percent rate should be paid directly by the public utility to the city and county.

HELCO makes monthly payments to both the State of Hawaii and the County of Hawaii. Form U-6 is the annual State of Hawaii's PSC tax return and consequently only uses the 4% PSC tax rate in this return. The County of Hawaii has not yet implemented an annual PSC tax return filing requirement. Monthly tax payments are mailed directly to both the State of Hawaii and the County of Hawaii. There is no transmittal form for the County of Hawaii at this time. HELCO

has attached redacted (account number) check copies of the County of Hawaii payments for April and July 2006. Please refer to the attachments to this response.

Hawaii Electric Light Company
Calculation of PSC Tax

		State of Hawaii	County of Hawaii	Reference
PSC Revenue Base		292,480,972	292,480,972	CA-IR-168, page 2
Tax Rate		4.000%	1.885%	
Total Tax Due		11,699,239	5,513,266	
10-Jan-06	(A)	970,000	457,000	
10-Feb-06	(A)	970,000	457,000	
10-Mar-06	(A)	970,000	457,000	
10-Apr-06	(A)	970,000	457,000	CA-IR-286, pg. 4
10-May-06	(A)	970,000	457,000	
10-Jun-06		978,461	461,180	
10-Jul-06		978,463	461,181	CA-IR-286, pg. 4
10-Aug-06		978,463	461,181	
10-Sep-06		978,463	461,181	
10-Oct-06		978,463	461,181	
10-Nov-06		978,463	461,181	
10-Dec-06		978,463	461,181	
Total Taxes		11,699,239	5,513,266	

(A) Based on 2005 PSC tax return liability. 2006 annual PSC Tax Return filed in April 2006.

HAWAII ELECTRIC LIGHT CO., INC.

PAY FOUR HUNDRED FIFTY SEVEN THOUSAND DOLLARS AND ZERO CENTS
TO THE ORDER OF
COUNTY OF HAWAII
DIRECTOR OF FINANCE
101 PAUMotu ST., STE.
HILLO HI 96720

DATE 01/24/06
CHECK AMOUNT \$457,000.00

Paul A. [Signature]
Director of Finance

#036702# #0045700000#

04192006
9121301028
9201779230
9201779230

121301028
EXCEPTION R&ID
0001064850

12/5 20465

WARNING: DO NOT CASH WITHOUT
HOLDING TO U.S. DEPT. OF TREASURY
VERIFY WATERMARK OR SIGNATURE
GENERAL FUND

Do Not Endorse Below This Line

HAWAII ELECTRIC LIGHT CO., INC.

PAY FOUR HUNDRED SIXTY ONE THOUSAND ONE HUNDRED EIGHTY ONE DOLLARS AND ZERO CENTS
TO THE ORDER OF
COUNTY OF HAWAII
DIRECTOR OF FINANCE
101 PAUMotu ST., STE.
HILLO HI 96720

DATE 01/25/06
CHECK AMOUNT \$61,181.00

Paul A. [Signature]
Director of Finance

#036977# #0046118100#

07512006
9121301028
9201779230

121301028
EXCEPTION R&ID
0001064850

1098 25093

WARNING: DO NOT CASH WITHOUT
HOLDING TO U.S. DEPT. OF TREASURY
VERIFY WATERMARK OR SIGNATURE
GENERAL FUND

Do Not Endorse Below This Line

Hawaii Statutes
Chapter 239 PUBLIC SERVICE COMPANY TAX LAW
Haw. Rev. Stat. § 239-5 Public utilities, generally.

§ 239-5 -- Public utilities, generally.

(a) There shall be levied and assessed upon each public utility, except airlines, motor carriers, common carriers by water, and contract carriers taxed by section 239-6, a tax of such rate per cent of its gross income each year from its public utility business as shall be determined in the manner hereinafter provided. The tax imposed by this section is in lieu of all taxes other than those below set out, and is a means of taxing the personal property of the public utility, tangible and intangible, including going concern value. In addition to the tax imposed by this chapter there also are imposed income taxes, the specific taxes imposed by chapter 249, the fees prescribed by chapter 269, any tax specifically imposed by the terms of the public utility's franchise or under chapter 240, the use or consumption tax imposed by chapter 238, and employment taxes.

The rate of the tax upon the gross income of the public utility shall be four per cent; provided that if:

- (1) A county provides by ordinance for a real property tax exemption for real property used by a public utility in its public utility business and owned by the public utility (or leased to it by a lease under which the public utility is required to pay the taxes upon the property), and
- (2) The county has not denied the exemption to the public utility, but excluding a denial based upon a dispute as to the ownership, lease, or use of a specific parcel of real property,

then there shall be levied and assessed a tax in excess of the four per cent rate determined in the manner hereinafter provided upon the gross income allocable to such county. The revenues generated from the tax in excess of the four per cent rate hereinbefore established shall be paid by the public utility directly to such county based upon the proportion of gross income from its public utility business attributable to such county, based upon the allocation made in the public utility's filings with the State of Hawaii; provided that if the gross income from the public utility business attributable to such county is not so allocated in the public utility's State filings, then the gross income from the public utility business shall be equitably allocated to each county. The relative number of access lines in each county shall be deemed an acceptable basis of equitable allocation for telecommunication companies.

The rate of the tax in excess of the four per cent rate hereinbefore established upon the gross income from the public utility business shall be determined as follows:

If the ratio of the net income of the company to its gross income is fifteen per cent or less, the rate of tax in excess of the four per cent rate on gross income shall be 1.885 per cent; for all companies having net income in excess of fifteen per cent of the gross, the rate of the tax on gross income shall increase continuously in proportion to the increase in ratio of net income to gross, at such rate that for each increase of one per cent in the ratio of net income to gross, there shall be an increase of .2675 per cent in the rate of the tax.

The following formula may be used to determine the rate, in which formula the term "R" is the ratio of net income to gross income, and "X" is the required rate of the tax on gross income for the utility in question:

$X = (26.75R - 2.1275) \%$; provided that in no case governed by the formula shall "X" be less than 1.885 per cent or more than 4.2 per cent.

However, if the gross income is apportioned under section 239-8(b) or (c), there shall be no adjustment of the rate of tax on the amount of gross income so apportioned to the State on

account of the ratio of the net income to the gross income being in excess of fifteen per cent, and it shall be assumed in such case that the ratio is fifteen per cent or less.

(b) Notwithstanding subsection (a), the rate of the tax upon the portion of the gross income of a carrier of passengers by land which consists in passenger fares for transportation between points on a scheduled route, shall be 5.35 per cent. However, if the carrier has other public utility gross income the fares nevertheless shall be included in applying subsection (a) in determining the rate of tax upon the other public utility gross income.

(c) Notwithstanding subsection (a), the rate of tax upon the portion of the gross income of:

- (1) A public utility that consists of the receipts from the sale of its products or services to another public utility that resells such products or services shall be one-half of one per cent; or
- (2) A public utility engaged in the business of selling telecommunication services to a person defined in section 237-13(6)(D) who resells such products or services, shall be as follows:

- (A) In calendar year 2000, 5.5 per cent;
- (B) In calendar year 2001, 5.0 per cent;
- (C) In calendar year 2002, 4.5 per cent;
- (D) In calendar year 2003, 4.0 per cent;
- (E) In calendar year 2004, 3.5 per cent;
- (F) In calendar year 2005, 3.0 per cent;
- (G) In calendar year 2006, 2.5 per cent; and
- (H) In calendar year 2007, and thereafter, 0.5 per cent;

provided that the resale of the products, services, or telecommunication services is subject to taxation under this section or subject to taxation at the highest rate under section 237-13(6); and provided further that the public utility's exemption from real property taxes imposed by chapter 246 shall be reduced by the proportion that its public utility gross income described herein bears to its total public utility gross income. Whenever the public utility has other public utility gross income, the gross income from the sale of its products or services to another public utility or a person subject to section 237-13(6)(D) shall be included in applying subsection (a) in determining the rate of tax upon the other public utility gross income. The department shall have the authority to implement the tax rate changes in paragraph (2) by prescribing tax forms and instructions that require tax reporting and payment by deduction, allocation, or any other method to determine tax liability with due regard to the tax rate changes.

L. 2001, c. 64, § 1 provides:

"Transition period. Commencing with the July 2001, installment of the remaining quarterly or monthly installments of the tax upon gross income which has been levied and assessed for the calendar year 2001 under section 239-5(a), Hawaii Revised Statutes, that portion of each such installment that is described in section 3 of this Act [which amended subsection (a) of this section] as the tax in excess of the rate of four per cent that is paid to a county if the county provides for a real property tax exemption for real property used by a public utility in its public utility business, shall be paid to the respective county director of finance as provided in section 3 of this Act. Provided that for the period July 2001 to December 2001, if a public utility is not required to pay to a particular county director of finance tax in excess of the rate of four per cent, as provided in section 3 of this Act, the public utility shall not be liable to the State or respective county for such portion of the installments of the tax imposed in excess of the rate of four per cent under section 239-5(a), Hawaii Revised Statutes, for the period July 2001 to December 2001."

(§ 239-5 enacted by L. 1932 2nd, c. 43, § 4; R.L. 1935, § 2143; R.L. 1945, § 5674; R.L. 1955, § 126-5; L. Sp. 1957, c. 1, § 9(c) to (f); L. 1963, c. 147, § 2(e); L. 1965, c. 201, §§ 30, 31; L. 1968, c. 59, § 2; L. 1974, c. 135, § 1; L. 1990, c. 34, § 13; L. 2000, Act 198, § 14; L. 2001, Act 64, § 3.)

END OF DOCUMENT -

CA-IR-287

Ref: HELCO Response to CA-IR-167, SUTA Tax Rate.

Please provide the following information regarding the HEI consolidated joint experience 0.41% SUTA and the 0.81% stand alone HELCO SUTA rate used for ratemaking purposes:

- a. Confirm that HELCO pays HECO the additional 0.40% in 2006 to compensate HECO for its below average stand-alone contribution rate.
- b. What was the HECO contribution rate used in the pending HECO rate case to determine SUTA Expense?
- c. Were HELCO payments to HECO considered in the establishment of the HECO rate stated in response to part (b) of this information request?
- d. What, if any, economic or other form of benefit is realized by HEI in using a joint experience rating, rather than paying stand-alone SUTA for each individual entity?
- e. Please quantify your response to part (d) of this information request, and explain why such benefits should not be shared among regulated entities for ratemaking purposes (if applicable).

HELCO Response:

- a. Confirmed. Settlements for the first and second quarter 2006 were made in May and August, respectively.
- b. The HECO contribution rate used to derive the estimated SUTA expense in the pending 2005 HECO rate case was 0%.
- c. No, the HECO contribution rate used for test year 2005 was independently based on HECO's 2005 stand alone rate without consideration of HELCO payments.
- d. Using the joint contribution rate results in a lower consolidated SUTA payment to the State of Hawaii.
- e. Please refer to CA-IR-167, page 9 for the pro forma calculation of the comparison of stand alone versus joint filing payments. This spreadsheet was submitted by Hawaiian Electric Industries, Inc. to the Department of Labor and Industrial Relations (DLIR) when it applied for the joint experience rate. The estimated consolidated benefit was approximately

\$113,000 (difference between stand alone tax total and joint filing tax total). Among the regulated entities, there was no benefit as joint taxes paid to the DLIR are projected to be in excess of the stand alone taxes (approximately \$84,000). As discussed in the Company's response to CA-IR-167, Hawaiian Electric Industries, Inc. tenders payment to HECO for any realized shortfall.

In past HELCO rate cases, revenue requirements have been evaluated and determined on a stand alone basis. The Company has consistently followed this methodology in determining its taxes for ratemaking purposes.

CA-IR-288

Ref: HELCO-WP-1401 & response to CA-IR-182 (Plant Additions).

The response to CA-IR-182(b) identified three construction projects with 2006 test year plant additions that are blanket projects, which do not require PIAs. Instead, funding for each of the identified projects was "taken from these blankets." Please provide the following:

- a. Please confirm that Attachment 1 to the referenced response did not contain any documentation supporting the 2006 plant additions for these three blanket projects. If this cannot be confirmed, please explain.
- b. Please explain the process followed by HELCO to determine and quantify the 2006 funding amount for each of the following blanket projects:
 1. H0007000, Unforeseeable OH Cust Req, \$1,337,973.
 2. H0011000, Unforeseeable UG Cust Req, \$1,907,232.
 3. H3521000, SSPP Requests, \$703,277.
- c. Please provide a copy of any workpapers, analyses or other documents that support the derivation of the blanket project amounts set forth in part (b) above.

HELCO Response:

- a. Correct. Attachment 1 in response to CA-IR182(b) did not contain any documentation supporting the 2006 plant additions for these three blanket projects. Attachment 1 in response to this IR reflects a current list of individual projects that were funded by the three blanket projects (H0007000, H0011000, and H3521000) where monies are transferred to create specific projects for 2006. Also included in Attachment 1 of this response are the approved budget amounts and forecasted 2006 plant addition dates.
- b. HELCO used a 4 year average based on the Board approved budgets for 2001 through 2004 for each of the subject blanket project. Please refer to HELCO T-14, page 5 starting from line 21. The proposed budget numbers are submitted for management review and may be adjusted based on considerations for financial integrity, budget constraints and need to fund higher priority projects. Priority is given to funding specific projects before funding the

blanket projects. Further details are provided below for the process used to determine the 2006 funding amount for the subject blanket projects:

1. H0007000, Unforeseeable OH Cust Req, \$1,337,973 – A representative four year average, \$1,586,827, of all the projects funded by H0007000 from 2001 to 2004 was calculated and then submitted for the Board's review and approval. The final approved budget was reduced due to funding limitations. The Board approved budget was \$1,337,973.
 2. H0011000, Unforeseeable UG Cust Req, \$1,907,232 - A representative four year average, \$1,911,219, of all the projects funded by H0011000 from 2001 to 2004 was calculated and then submitted for the Board's review and approval. The final approved budget was reduced due to funding limitations. The Board approved budget was \$1,907,232.
 3. H3521000, SSPP Requests, \$703,277 - A representative four year average, \$835,673, of all the projects funded by H3521000 from 2001 to 2004 was calculated and then submitted for the Board's review and approval. The final approved budget was reduced due to funding limitations. The Board approved budget was \$703,277.
- c. See Attachment 2 of this response.

Hawaii Electric Light Company, Inc.
2006 HELCO SPECIFIC PROJECTS FUNDED BY BLANKET PROJECTS

	A	B	C	D	E
	Blanket Origin	Proj No	Project Description	Initial Plant Addition Date	Budget Transferred From Blanket
1	H0007000	H0001436	Haleiili S/D	07/24/06	44,000
2	H0007000	H0001422	Vim Patton	05/17/06	44,136
3	H0007000	H0001421	Neil Vieth	2006-9	29,000
4	H0007000	H0001431	Joseph Magaldi	05/08/06	35,467
5	H0007000	H0001432	Vivian Whitney	06/09/06	49,000
6	H0007000	H0001430	Glenwood Farm Lots	2006-12	155,343
7	H0007000	H0001434	Peter Aickin	05/04/06	26,000
8	H0007000	H0001435	Kikala Keokea S/D	2006-12	330,455
9	H0007000	H0001439	Anthony & Fronda Harris	2006-9	23,000
10	H0007000	H0001451	Puaoono S/D-Incr II	05/08/06	29,706
11	H0007000	H0001463	Kealakaha Bridge Replacement	2007-4*	218,528
12	H0007000	H0001469	Frank Deluz, Jr	06/09/06	44,279
13	H0007000	H0001478	Roberta St. Ambrogio	08/11/06	29,037
14	H0007000	H0001480	David & Doris Greer	2006-9	35,632
15	H0007000	H0001483	Deborah & Richard Ryken	2006-9	95,791
16	H0007000	H0001485	Orchards at Pepeekeo Ph 2	2006-12	88,857
17	H0007000	H0001486	Brenda Deluz-Campbell	2006 - 9	25,887
18	H0007000 Total				1,302,118
19	H0011000	H0001438	Keahole Heights Ph II S/D	2006-9	32,000
20	H0011000	H0001442	Golf Villas-LE	03/27/06	150,041
21	H0011000	H0001419	Parker Well No. 1	04/13/06	30,000
22	H0011000	H0001420	Sunset Ridge Ph 3 Unit 3	05/02/06	43,000
23	H0011000	H0001444	Lokahi Makai S/D-Phase I	2006 - 12	228,345
24	H0011000	H0001445	Lokahi Makai S/D-Phase II	06/13/06	152,888
25	H0011000	H0001443	KOYO USA 3	2006 - 12	78,555
26	H0011000	H0001450	Hapuu Kapanala S/D	05/22/06	77,000
27	H0011000	H0001453	Kulalani at Mauna Lani	07/10/06	126,670
28	H0011000	H0001462	Alili Cove	06/01/06	173,833
29	H0011000	H0001461	Prince Kuhio Plaza	2006-12	38,379
30	H0011000	H0001455	Waikoloa Beach Villas Ph II	2006-12	55,000
31	H0011000	H0001470	Hualalai Parcel 10B & 13 S/D	2006-10	393,341
32	H0011000	H0001471	Hainoa Villas Parcel 7B	06/01/06	46,162
33	H0011000	H0001477	Pualani Estates Subdn Phase 2	2006-10	244,630
34	H0011000 Total				1,869,844
35	H3521000	H0001437	SSPP Unit 857-Alderdyce	2006-12	15,379
36	H3521000	H0001424	SSPP Unit 848-Atkinson	06/22/06	15,000
37	H3521000	H0001425	SSPP Unit 868-Berkich	05/08/06	20,000
38	H3521000	H0001426	SSPP Unit 866-Pua Mauka Dev	2006-9	27,000
39	H3521000	H0001427	SSPP Unit 895-Wolske	05/23/06	10,000
40	H3521000	H0001428	SSPP Unit 833-Caldwell	05/09/06	33,000
41	H3521000	H0001429	SSPP Unit 894-Randall	05/09/06	12,000
42	H3521000	H0001423	SSPP Unit 809-Desouza	06/16/06	20,000
43	H3521000	H0001448	SSPP Unit 808-Dang	06/14/06	40,000
44	H3521000	H0001441	SSPP Unit 905-Pied	05/26/06	10,000
45	H3521000	H0001447	SSPP Unit 890-Warren	2006 - 10	67,258
46	H3521000	H0001449	SSPP Unit 884-Scarborough	06/01/06	34,362
47	H3521000	H0001452	SSPP Unit 855-Sieber	2006 - 12	23,102
48	H3521000	H0001466	SSPP Unit 903-Boyles	2006 - 10	30,746
49	H3521000	H0001465	SSPP Unit 871-Jeanneault	2006 - 10	21,000
50	H3521000	H0001464	SSPP Unit 865-Denson	2006 - 10	17,000
51	H3521000	H0001476	SSPP Unit 835-Ortega	2006-09	25,000
52	H3521000	H0001481	SSPP Unit 900-Dickerson	07/21/06	30,000
53	H3521000	H0001488	SSPP Unit 908-Derkovich	2006-10	31,000
54	H3521000	H0001489	SSPP Unit 922-Elmore	2006-10	16,000
55	H3521000	H0001492	SSPP Unit 859-Cabral	2006-10	23,000
56	H3521000	H0001491	SSPP Unit 911-Edelhart	2006-12	35,799
57	H3521000	H0001494	SSPP Unit 877-Thacher	2006 - 12	29,762
58	H3521000	H0001498	SSPP Unit 897 - Sherrell	2006-12	21,538
59	H3521000	H0001501	SSPP Unit 904-Steich	2006-11	19,700
60	H3521000 Total				627,646
61					
62	Grand Total				3,799,608
* This Kealakaha project required an application to the PUC as Docket No. 2006-0181 and an Interim Order 22597 was issued. Although the date shown is in 2007, based on an interim order, HELCO did work on a part of this project in August 2006 and that part is in-service and will be plant added this year. Actual cost for this part of the project as of September 28, 2006 is \$171,956.90. The remaining part of the project will await the final D&O and the balance of the project is forecasted to be completed around April 2007. In any case, the objective of this attachment is to show that we have transferred funds from these blankets to create specific projects.					
Source:		ARTransfer2006.xls (8/30/06)			
		July 2006 Pillar Data			
		Accounting Plant Addition Records			

Hawaii Electric Light Company, Inc.
DEVELOPMENT OF 2006 BLANKET PROJECT BUDGETS

	2001 Budget	2002 Budget	2003 Budget	2004 Budget	4-Year Average	2006 Budget
H0007000 - Unforeseeable OH Cust Req	2,251,204	1,398,361	1,377,273	1,320,470	1,586,827	1,337,973
H0011000 - Unforeseeable UG Cust Req	1,681,015	2,603,471	2,297,597	1,062,794	1,911,219	1,907,232
H3521000 - SSPP Requests	1,124,361	1,193,469	479,673	545,187	835,673	703,277

CA-IR-289

Ref: HELCO-WP-1406 & response to CA-IR-187 (Plant Retirements).

The response to CA-IR-187(b) indicates that page 2 of HELCO-WP-1406 includes both terminal and interim production retirements. In addition, page 3 of the response to CA-IR-187 provides actual plant retirements during the months of January-July 2006. Please provide the following:

- a. Referring to HELCO-WP-1406, please provide a breakdown of the production retirements for each year 2001-2005 between terminal and interim retirement amounts.
- b. The response to CA-IR-187(b) also states that a number of terminal retirements occurred in 2002 and 2004 due to the installation of Keahole CT-4 and CT-5. If the response to part (a) of this information request indicates that the requested information is not available, please provide the terminal retirement values in calendar years 2002 and 2004 associated with the installation of the new Keahole units.

HELCO Response:

- a. The requested information is attached.
- b. Production terminal retirements due to the installation of Keahole CT-4 and CT-5 were limited to D-18, D-19 and D-20 in 2004, which was required by the Covered Source Permit (CSP) for CT-4 and CT-5, issued by the Hawaii State Department of Health as an air pollution emissions netting process. The CSP further restricted the operation of Keahole D-21 to a maximum of 70,000 gallons of diesel fuel consumed per 12 month rolling average period. One other terminal retirement that took place in 2004 was the retirement of the Puueo #2 hydroelectric generator which suffered a catastrophic failure which rendered the machine beyond economical repair. This was subsequently replaced with a new hydroelectric generator in 2005. In 2002, Shipman Unit #1 and Waimea Diesels #8, #9, and #10 were retired primarily due to the commercial operation of Hamakua Energy Partners. Refer to page 2 of this response for the values associated with these retirements.

Hawaii Electric Light Company, Inc.
Production Terminal and Interim Retirement
Actual 2001 - 2005

	2001	2002	2003	2004	2005
<u>PRODUCTION RETIREMENTS</u>					
Terminal Retirements:					
Shipman 1		638,031			
Puueo 2				163,654	
Waimea 8, 9, 10		576,906			
Keahole 18, 19, 20				2,102,262	
Terminal Retirements	-	1,214,937	-	2,265,916	-
Interim Retirements	241,285	711,288	102,615	553,919	794,364
Total Retirements	241,285	1,926,225	102,615	2,819,835	794,364

CA-IR-290

Ref: HELCO-1501 & response to CA-IR-192 (Keahole Common Facilities).

The response to CA-IR-192(e) indicates that the 80 gpm capacity water treatment system was originally designed to support the existing Keahole units and to accommodate the needs of ST-7. However, the response states that the water mass balance for ST-7 will be reviewed during the design phase to ensure that the water treatment system has capacity to support ST-7. Please provide the following:

- a. Has HELCO started the "design phase" for ST-7?
- b. If not, when does HELCO anticipate that the ST-7 "design phase" will commence?
- c. In general terms, when does HELCO believe that a determination will be made as to whether the water treatment system will, in fact, be adequate to support ST-7 (including SCR)?

HELCO Response:

- a. The design phase began on August 10, 2006 when the design kick-off meeting was held with HELCO's engineering consultant Black & Veatch.
- b. Not applicable.
- c. Review of the adequacy of the capacity of current water treatment system has begun and is expected to continue at least through the next 6 months as the specific design details and requirements for ST-7 are reviewed and established by HELCO and Black & Veatch.

CA-IR-291

Ref: HELCO-1501 & response to CA-IR-190 (CT-4 & 5 AFUDC).

In response to CA-IR-190(a), the Company provided a breakdown of the monthly CWIP balances set forth on HELCO-1501 between Keahole CT-4, CT-5 and the three categories of common facilities (i.e., shop/warehouse, fire protection and waste water). A note on page 3 of HELCO's response indicated that monthly details were not readily available for certain months (i.e., 34 months) of the period November 1998 through December 2004. Please provide the following:

- a. Please confirm that the total CWIP balance was readily available for all months. If this cannot be confirmed, please explain.
- b. Was the information that was not readily available limited to the values associated with the common facilities (shop/warehouse, fire protection and waste water)? Please explain.
- c. Please explain why the information for those 34 months was not readily available.

HELCO Response:

- a. The CWIP balance and the monthly activity for Keahole CT-4, CT-5 and the three categories of common facilities are provided on attached pages 2 – 5. The information at the time CA-IR-190 was requested was not readily available since it was very time consuming to go through the ELLISPE accounting system to retrieve the information by month.

Approximately 24 hours was spent retrieving the information requested.

- b. See response to item a.
- c. See response to item a.

Hawaii Electric Light Company, Inc.
Keahole CT-4 & 5 - CWIP Balances and Monthly Activity
December 1998 - December 2004

<u>Month</u>	<u>CT-4</u>	<u>CT-5</u>	<u>Warehouse/ Shop</u>	<u>Fire Protection System</u>	<u>Waste Water System</u>	<u>Total CWIP Balance</u>
Nov-98	32,676,914	21,491,631	2,591,549	3,716,961	13,565,799	74,042,854
	289,489	269,611	0	0	0	559,100
Dec-98	32,966,403	21,761,242	2,591,549	3,716,961	13,565,799	74,601,954
	168	0	0	0	613,235	613,403
Jan-99	32,966,571	21,761,242	2,591,549	3,716,961	14,179,034	75,215,357
	133	133	75	0	15,288	15,629
Feb-99	32,966,704	21,761,375	2,591,624	3,716,961	14,194,322	75,230,986
	21,643	497	158,611	0	72,265	253,016
Mar-99	32,988,347	21,761,872	2,750,235	3,716,961	14,266,586	75,484,002
	88,490	291	0	61,093	49,528	199,402
Apr-99	33,076,837	21,762,163	2,750,235	3,778,054	14,316,115	75,683,404
		0	0	0	27,944	27,944
May-99	33,076,837	21,762,163	2,750,235	3,778,054	14,344,059	75,711,348
	173,560	156,679	98,134	212,868	150,621	791,862
Jun-99	33,250,397	21,918,843	2,848,369	3,990,921	14,494,680	76,503,211
	12,333	14,842	0	85,668	403,511	516,354
Jul-99	33,262,731	21,933,684	2,848,369	4,076,589	14,898,191	77,019,565
	11,929	0	0	124,413	112,526	248,868
Aug-99	33,274,660	21,933,684	2,848,369	4,201,002	15,010,717	77,268,433
		0	(7,703)	56,431	(13,486)	35,242
Sep-99	33,274,660	21,933,684	2,840,666	4,257,433	14,997,232	77,303,675
		0	0	142,719	26,935	169,654
Oct-99	33,274,660	21,933,684	2,840,666	4,400,152	15,024,167	77,473,329
	850,685	(62,852)	0	279,826	(390,670)	676,988
Nov-99	34,125,344	21,870,832	2,840,666	4,679,978	14,633,496	78,150,317
	94,742	100,281	0	203,082	1,242,419	1,640,524
Dec-99	34,220,086	21,971,113	2,840,666	4,883,060	15,875,915	79,790,841
	128,023	49,963	0	0	72,766	250,752
Jan-00	34,348,109	22,021,076	2,840,666	4,883,060	15,948,682	80,041,593
	14,011	0	0	0	61,755	75,765
Feb-00	34,362,120	22,021,076	2,840,666	4,883,060	16,010,436	80,117,358
	101,257	46,928	0	0	73,026	221,211
Mar-00	34,463,377	22,068,004	2,840,666	4,883,060	16,083,463	80,338,569
	10,200	(3,561)	0	0	13,811	20,450
Apr-00	34,473,577	22,064,443	2,840,666	4,883,060	16,097,274	80,359,019
	295,270	16,416	0	0	(606,490)	(294,804)
May-00	34,768,847	22,080,858	2,840,666	4,883,060	15,490,784	80,064,215
	373,726	168,832	0	0	(2,501)	540,057
Jun-00	35,142,573	22,249,691	2,840,666	4,883,060	15,488,283	80,604,272
	13,891	1,703	0	0	38,804	54,398
Jul-00	35,156,464	22,251,394	2,840,666	4,883,060	15,527,087	80,658,671
	37,107	1,632	0	0	193,843	232,583

Hawaii Electric Light Company, Inc.
Keahole CT-4 & 5 - CWIP Balances and Monthly Activity
December 1998 - December 2004

<u>Month</u>	<u>CT-4</u>	<u>CT-5</u>	<u>Warehouse/ Shop</u>	<u>Fire Protection System</u>	<u>Waste Water System</u>	<u>Total CWIP Balance</u>
Aug-00	35,193,572	22,253,026	2,840,666	4,883,060	15,720,930	80,891,253
	10,702	1,986	0	0	14,557	27,245
Sep-00	35,204,274	22,255,012	2,840,666	4,883,060	15,735,487	80,918,498
	89,178	1,632	0	33,830	0	124,640
Oct-00	35,293,451	22,256,644	2,840,666	4,916,890	15,735,487	81,043,138
	125,389	2,943	0	0	(26,406)	101,926
Nov-00	35,418,840	22,259,587	2,840,666	4,916,890	15,709,080	81,145,064
	0	0	0	0	0	0
Dec-00	35,418,840	22,259,587	2,840,666	4,916,890	15,709,080	81,145,064
	0	0	0	0	0	0
Jan-01	35,418,840	22,259,587	2,840,666	4,916,890	15,709,080	81,145,064
	98,824	1,002	0	0	368	100,194
Feb-01	35,517,664	22,260,589	2,840,666	4,916,890	15,709,449	81,245,258
	50,439	491	0	0	0	50,930
Mar-01	35,568,103	22,261,080	2,840,666	4,916,890	15,709,449	81,296,188
	0	0	0	0	2,531	2,531
Apr-01	35,568,103	22,261,080	2,840,666	4,916,890	15,711,979	81,298,719
	0	0	0	0	0	0
May-01	35,568,103	22,261,080	2,840,666	4,916,890	15,711,979	81,298,719
	0	0	0	0	0	0
Jun-01	35,568,103	22,261,080	2,840,666	4,916,890	15,711,979	81,298,719
	257,283	3,617	0	0	0	260,900
Jul-01	35,825,386	22,264,697	2,840,666	4,916,890	15,711,979	81,559,619
	0	0	0	0	0	0
Aug-01	35,825,386	22,264,697	2,840,666	4,916,890	15,711,979	81,559,619
	114,552	1,410	0	0	0	115,962
Sep-01	35,939,938	22,266,107	2,840,666	4,916,890	15,711,979	81,675,581
	0	0	0	0	0	0
Oct-01	35,939,938	22,266,107	2,840,666	4,916,890	15,711,979	81,675,581
	351,669	2,472	0	0	25,200	379,341
Nov-01	36,291,607	22,268,579	2,840,666	4,916,890	15,737,179	82,054,922
	(2,211,315)	7,973,869	(482,836)	(2,392,171)	(2,660,519)	227,028
Dec-01	34,080,292	30,242,448	2,357,830	2,524,719	13,076,660	82,281,950
	27,142	521	0	0	(6)	27,656
Jan-02	34,107,434	30,242,969	2,357,830	2,524,719	13,076,654	82,309,606
	51,185	1,460	0	0	109	52,753
Feb-02	34,158,619	30,244,429	2,357,830	2,524,719	13,076,762	82,362,359
	92,251	521	0	0	28	92,800
Mar-02	34,250,870	30,244,950	2,357,830	2,524,719	13,076,791	82,455,160
	60,531	1,430	6,183	0	55	68,199
Apr-02	34,311,401	30,246,380	2,364,013	2,524,719	13,076,846	82,523,359
	33,742	1,675	0	0	1,384	36,801
May-02	34,345,143	30,248,055	2,364,013	2,524,719	13,078,230	82,560,160

Hawaii Electric Light Company, Inc.
Keahole CT-4 & 5 - CWIP Balances and Monthly Activity
December 1998 - December 2004

<u>Month</u>	<u>CT-4</u>	<u>CT-5</u>	<u>Warehouse/ Shop</u>	<u>Fire Protection System</u>	<u>Waste Water System</u>	<u>Total CWIP Balance</u>
	65,327	6,182	0	0	2,054	73,563
Jun-02	34,410,470	30,254,236	2,364,013	2,524,719	13,080,284	82,633,723
	138,372	49,571	4,612	0	104,924	297,479
Jul-02	34,548,842	30,303,807	2,368,625	2,524,719	13,185,208	82,931,202
	164,081	74,929	0	0	509	239,519
Aug-02	34,712,923	30,378,736	2,368,625	2,524,719	13,185,717	83,170,720
	1,234,973	669,383	0	0	74,080	1,978,436
Sep-02	35,947,896	31,048,119	2,368,625	2,524,719	13,259,797	85,149,156
	847,178	514,215	0	4,316	233,910	1,599,619
Oct-02	36,795,074	31,562,334	2,368,625	2,529,035	13,493,707	86,748,774
	679,606	56,147	0	0	109,159	844,911
Nov-02	37,474,680	31,618,480	2,368,625	2,529,035	13,602,865	87,593,686
	1,748,340	195,537	0	0	314,680	2,258,557
Dec-02	39,223,020	31,814,017	2,368,625	2,529,035	13,917,545	89,852,243
	524,457	8,740	0	0	37,926	571,123
Jan-03	39,747,477	31,822,757	2,368,625	2,529,035	13,955,471	90,423,366
	55,098	2,062	0	0	5,643	62,803
Feb-03	39,802,575	31,824,819	2,368,625	2,529,035	13,961,114	90,486,169
	80,208	18,110	0	0	21,765	120,083
Mar-03	39,882,783	31,842,929	2,368,625	2,529,035	13,982,879	90,606,252
	239,828	1,807	0	0	6,392	248,027
Apr-03	40,122,611	31,844,736	2,368,625	2,529,035	13,989,271	90,854,279
	70,800	1,659	0	0	2,634	75,093
May-03	40,193,411	31,846,395	2,368,625	2,529,035	13,991,905	90,929,372
	101,294	9,302	0	0	0	110,596
Jun-03	40,294,705	31,855,697	2,368,625	2,529,035	13,991,905	91,039,968
	101,002	1,629	0	0	0	102,631
Jul-03	40,395,707	31,857,326	2,368,625	2,529,035	13,991,905	91,142,599
	40,252	144	0	0	0	40,396
Aug-03	40,435,959	31,857,470	2,368,625	2,529,035	13,991,905	91,182,995
	59,265	31,549	0	0	0	90,814
Sep-03	40,495,224	31,889,019	2,368,625	2,529,035	13,991,905	91,273,809
	113,272	977	0	0	0	114,249
Oct-03	40,608,496	31,889,996	2,368,625	2,529,035	13,991,905	91,388,058
	162,227	3,565	0	0	25,200	190,992
Nov-03	40,770,723	31,893,561	2,368,625	2,529,035	14,017,105	91,579,050
	(3,117,157)	1,824,631	381,044	356,599	522,441	(32,442)
Dec-03	37,653,566	33,718,192	2,749,669	2,885,634	14,539,546	91,546,608
	310,811	125,655	0	0	45,373	481,839
Jan-04	37,964,377	33,840,882	2,749,669	2,885,634	14,584,952	92,025,514
	656,255	202,673	0	0	63,157	922,085
Feb-04	38,620,632	34,043,555	2,749,669	2,885,634	14,648,109	92,947,599
	2,042,530	302,359	0	12,059	161,567	2,518,515

Hawaii Electric Light Company, Inc.
Keahole CT-4 & 5 - CWIP Balances and Monthly Activity
December 1998 - December 2004

<u>Month</u>	<u>CT-4</u>	<u>CT-5</u>	<u>Warehouse/ Shop</u>	<u>Fire Protection System</u>	<u>Waste Water System</u>	<u>Total CWIP Balance</u>
Mar-04	40,663,162	34,345,914	2,749,669	2,897,693	14,809,676	95,466,114
	863,749	235,647	0	1,902	19,003	1,120,301
Apr-04	41,526,911	34,581,561	2,749,669	2,899,595	14,828,678	96,586,414
	(558,367)	2,069,991	312,668	380,414	1,153,733	3,358,439
May-04	40,968,544	36,651,552	3,062,337	3,280,009	15,982,411	99,944,853
	500,539	249,899	0	0	7,519	757,957
Jun-04	41,469,083	36,901,451	3,062,337	3,280,009	15,989,930	100,702,810
	921,978	1,100,427	0	6,141	59,493	2,088,039
Jul-04	42,391,061	38,001,878	3,062,337	3,286,150	16,049,423	102,790,849
	363,963	132,598	148,368	170,558	622,486	1,437,973
Aug-04	42,755,024	38,134,476	3,210,705	3,456,708	16,671,909	104,228,822
	591,529	794,349	0	23,612	349,946	1,759,436
Sep-04	43,346,553	38,928,825	3,210,705	3,480,320	17,021,855	105,988,259
	158,661	95,092	0	4,584	15,711	274,048
Oct-04	43,505,214	39,023,917	3,210,705	3,484,904	17,037,566	106,262,307
	221,828	157,797	0	0	25,240	404,865
Nov-04	43,727,042	39,181,714	3,210,705	3,484,904	17,062,806	106,667,172
	1,817,463	1,886,360	50,226	43,195	336,623	4,133,867
Dec-04	45,544,506	41,068,074	3,260,931	3,528,099	17,399,429	110,801,039

CA-IR-292

Ref: HELCO-1501 & response to CA-IR-190 (CT-4 & 5 AFUDC).

In response to CA-IR-190(a), the Company provided a breakdown of the monthly CWIP balances set forth on HELCO-1501 between Keahole CT-4, CT-5 and the three categories of common facilities (shop/warehouse, fire protection and waste water). CA-IR-190(b) requested a similar breakdown of monthly detail from the inception of the Keahole project through October 1998. In response, HELCO referred to and provided a copy of the Company's response to CA-IR-14017, pages 4-5, from Docket No. 99-0207. Please provide the following:

- a. Referring to pages 2-3 of the referenced response, does the Company have comparable monthly detail for the three categories of common facilities (shop/warehouse, fire protection and waste water) from the inception of the Keahole project through October 1998? Please explain.
 1. If the response to part (a) of this information request is affirmative, please provide the referenced monthly detail balances for the three categories of common facilities in a similar format.
 2. If the response to part (a) of this information request is negative, please explain why such information is not available.
- b. Referring to page 2 of the referenced response, do the balances for the shop/warehouse, fire protection system and waste water system for November 1998 include or exclude AFUDC? Please explain.
 1. If the response to part (b) of this information request indicates that the November 1998 balance for the shop/warehouse, fire protection system and waste water system include AFUDC, please provide a breakdown of the balance for each category between AFUDC and non-AFUDC components. If this information cannot be provided, please explain.
 2. If the response to part (b) of this information request indicates that the monthly balances for the shop/warehouse, fire protection system and waste water system exclude AFUDC, please confirm that the AFUDC associated with the November 1998 balance for each common plant category was included in the CT-4 or CT-5 columns. If this cannot be confirmed, please explain

HELCO Response:

- a. No, the Company does not have comparable monthly detail for the three categories of common facilities (shop/warehouse, fire protection and waste water). The reason such information is not available was discussed in HELCO's test year 2000 rate proceeding in Docket No. 99-0207, HELCO RT-9, pages 19 through 34.
- b. The information on page 2 of HELCO's response to CA-IR-190 for the shop/warehouse, fire protection system and waste water system CWIP balances as of November 1998 does

include AFUDC. The balances for each category between AFUDC and non-AFUDC components are as follows:

	Non-AFUDC	AFUDC	Total
CT-4	\$22,106,678	\$10,570,236	\$32,676,914
CT-5	\$14,379,831	\$ 7,111,800	\$21,491,631
Shop/Warehouse	\$ 2,281,808	\$ 309,741	\$ 2,591,549
Fire Protection System	\$ 3,091,259	\$ 625,702	\$ 3,716,961
Waste Water System	<u>\$10,731,082</u>	<u>\$ 2,834,717</u>	<u>\$13,565,799</u>
Total	<u>\$52,950,658</u>	<u>\$21,452,196</u>	<u>\$74,042,854</u>

CA-IR-293

Ref: HELCO-1501 and responses to CA-IR-191 & CA-IR-163 (CT-4 & 5 AFUDC).

In Decision and Order No. 18365 (Docket No. 99-0207), the Commission allowed \$7,570,152 in rate base associated with the shop/warehouse building, new fire protection system and the water treatment system. On page 2 of the response to CA-IR-191, the sum of the first amounts closed to plant for each common facility category equals the \$7,570,152 included in rate base for D&O No. 18365. Please provide the following:

- a. Please confirm that the Company actually closed the following common facility amounts to plant in service on the specified date. If this cannot be confirmed, please explain.
 1. Shop/warehouse: \$972,599, December 1988.
 2. Fire protection system: \$745,548, September 1999.
 3. Waste water system: \$5,852,005, December 1999.
- b. Referring to part (a) above, did HELCO commence recording book depreciation expense on the common facility amounts upon closing the respective balances to plant in service? If not, please explain why the accrual of depreciation expense did not commence of the identified date(s).

HELCO Response:

- a. The shop/warehouse closed to plant in December 1998. The fire protection system and water treatment system closed to plant on the dates specified above.

The timing of the amounts that initially closed to plant is as shown on page 3 of this response. Based on Decision and Order No. 18365 (Docket No. 99-0207), an adjustment was made in November 2001 to reclassify certain amounts related to the Keahole shop/warehouse, fire protection system and water treatment system from plant in service to construction work in progress. Subsequent to the reclassification, the amounts that remained closed to plant for the shop/warehouse and fire protection system are as specified above. As shown on page 3 of this response, subsequent to the reclassification, the amount that remained closed to plant for the water treatment system is \$5,873,120, or \$21,115 over the amount that should have closed to plant. The depreciation effect of this oversight is included in the response to part b.

- b. HELCO commenced recording book depreciation expense on the common facility amounts beginning in January of the year following the closed to plant date (i.e., beginning in January 1999 for the amounts that closed to plant in 1998 for the shop/warehouse and beginning in January 2000 for the amounts that closed to plant in 1999 for the fire protection system and water treatment system). This is in accordance with the depreciation methodology discussed by Ms. Ikeda in HELCO T-12 at page 2.

In 2001, \$754,177 was reversed out of accumulated depreciation for the excess depreciation taken in 1999 and 2000, and the 2001 depreciation accrual was decreased by \$696,117 to account for the decrease in the depreciable base due to the reclassification of the Keahole shop/warehouse, fire protection system and water treatment system from plant in service to construction work in progress. This adjustment is discussed by Ms. Ikeda in HELCO T-12 at page 6.

As shown on page 1 of HELCO-WP-1206, the depreciation decrease was calculated based on a reclassification amount of \$14,856,316. As shown on page 4 of this response, however, the amount that should have been reclassified in 2001 is \$14,850,334, and an additional \$1,067 should have been reclassified in 2003. If the proper total reclassification of \$14,851,401 had been used for the basis of calculating the depreciation adjustment, the accumulated depreciation balance at December 31, 2005 would decrease by \$9,761 and the 2006 depreciation accrual would increase by \$421. The calculations of these amounts are shown on page 5 of this response.

Hawaii Electric Light Company, Inc.
Keahole Shop/Warehouse, Fire Protection System, Water Treatment System
Plant Additions 1998 - 2003

a	b	c	d	e	f (d+e)	g (b+c+f)
Date Closed to Plant	Warehouse/ Shop H3115000	Fire Protection System H3111000	Water Treatment System H3191000	Water Treatment System H3194000	Total Water Treatment System	Total Addition for Month
Dec-98	4,731,414.63				-	4,731,414.63
Feb-99	142,962.88				-	142,962.88
Apr-99	172,686.17				-	172,686.17
Jun-99	98,134.12				-	98,134.12
Jul-99	(2,264,803.78)				-	(2,264,803.78)
Sep-99		4,256,941.13			-	4,256,941.13
Oct-99	(39,646.41)				-	(39,646.41)
Dec-99	(81.70)	911,882.16	11,975,157.32	3,105,753.82	15,080,911.14	15,982,711.60
Jan-00		(285,760.09)			-	(285,760.09)
Feb-00			793,193.08	1,815.31	795,008.39	795,008.39
Mar-00			219,365.11	14,540.18	233,905.29	233,905.29
Apr-00			12,178.44	1,700.82	13,879.26	13,879.26
May-00			(611,342.26)	(14,005.71)	(625,347.97)	(625,347.97)
Jun-00			(2,501.39)	24.38	(2,477.01)	(2,477.01)
Jul-00			80,171.42	26.63	80,198.05	80,198.05
Aug-00			219,042.71	24.46	219,067.17	219,067.17
Sep-00			14,557.13	217.75	14,774.88	14,774.88
Oct-00		33,830.00		75.91	75.91	33,905.91
Nov-00			(96,714.10)	(4,193.49)	(100,907.59)	(100,907.59)
Dec-00			(1,065,269.66)		(1,065,269.66)	(1,065,269.66)
Jan-01			1,069,456.64		1,069,456.64	1,069,456.64
Feb-01			(2,882.50)	1,018.35	(1,864.15)	(1,864.15)
Mar-01			(1,066,389.93)	(916.69)	(1,067,306.62)	(1,067,306.62)
Apr-01			2,530.69	143.97	2,674.66	2,674.66
Jun-01				285.71	285.71	285.71
Jul-01				(346.86)	(346.86)	(346.86)
Aug-01				114.11	114.11	114.11
Sep-01				(114.11)	(114.11)	(114.11)
Oct-01				53.55	53.55	53.55
Nov-01				16,156.45	16,156.45	16,156.45
Nov-01 reclass	(1,868,066.91)	(4,171,345.20)	(6,926,021.41)	(1,864,852.88)	(8,790,874.29)	(14,830,286.40) ***
Jan-02 *				50.30	50.30	50.30
Feb-02 *				108.56	108.56	108.56
Mar-02 *				28.35	28.35	28.35
Apr-02 *	6,182.77			54.74	54.74	6,237.51
May-02 *			1,328.28	56.06	1,384.34	1,384.34
Jun-02 *			1,967.72	86.85	2,054.57	2,054.57
Jul-02 *	4,611.81		146,208.42	56.74	146,265.16	150,876.97
Aug-02 *			10,039.19	57.42	10,096.61	10,096.61
Sep-02 *			74,021.94	84.78	74,106.72	74,106.72
Oct-02 *		4,316.48	188,884.02	45,025.51	233,909.53	238,226.01
Nov-02 *			109,159.09	(0.37)	109,158.72	109,158.72
Dec-02 *			263,574.50	149.76	263,724.26	263,724.26
Jan-03 *			37,925.40	58.28	37,983.68	37,983.68
Feb-03 *			5,585.63		5,585.63	5,585.63
Mar-03 *			10,882.04	10,881.99	21,764.03	21,764.03
Apr-03 *			6,137.64	254.91	6,392.55	6,392.55
May-03 *			2,192.61	440.68	2,633.29	2,633.29
Jul-03 *				33.11	33.11	33.11
Nov-03 *			25,200.00		25,200.00	25,200.00
Dec-03 reclass*	(10,794.58)	(4,316.48)	(881,819.67)	(57,647.62)	(939,467.29)	(954,578.35)
total plant additions	972,599.00	745,548.00	4,615,818.10	1,257,301.71	5,873,119.81	7,591,266.81
discrepancy**			(1,286.81)	(19,828.00)	(21,114.81)	(21,114.81) ***
PUC allowed plant additions	972,599.00	745,548.00	4,614,531.29	1,237,473.71	5,852,005.00	7,570,152.00

* In December 2003, the 2002 and 2003 charges were reclassified to construction work in progress. The reclassification should have zeroed out the 2002 and 2003 charges. However, a \$1,286.81 balance remained for H3191000 and a -\$219.95 balance remained for H3194000. These amounts are part of the total discrepancy.

** Additions of \$20,047.95 incurred prior to 2002 for H3194000 does not appear to have been included in the November 2001 reclassification calculation. This amount is part of the total discrepancy.

*** Total amount that should have been reclassified is -\$14,851,401.21 (-\$14,830,286.40-\$21,114.81).

Hawaii Electric Light Company, Inc.
Book Depreciation Accrual - Keahole Basis Adjustment
Utilizing Book Depreciation Rates From 1985 Depreciation Study (Docket 5456; Effective 1/1/87)
For 1998 - 2003

Assuming \$14,850,334.35 (\$14,830,286.40 November 2001 reclassification plus \$20,047.95 additional costs that were not reclassified) should have been reclassified in November 2001 and \$1,066.86 (2002 and 2003 costs that remained closed to plant after the December 2003 reclassification) should have been reclassified in December 2003 (see page 3 of this response), the total basis for the depreciation adjustment should be \$14,851,401.21.

A	B	C	D	E	F	G
Acct	Description	Depr Rate	1998 Basis Adjustment	1999 Basis Adjustment	2000 Basis Adjustment	2001 Basis Adjustment
Other Production - Internal Combustion Engine Plants						
341	Structures & Improvements	2.7		(50,954.98)	(412.52)	
342	Fuel Holders, Producers, & Accessories	6.9		(592,664.48)	(42,544.19)	(1,366.88)
344	Generators	5.0		(8,244,831.60)	(9,751.33)	(9,173.65)
345	Accessory Electric Equipment	4.4		(1,757,714.95)	(85,864.75)	(4,009.18)
346	Miscellaneous Power Plant Equipment	5.0		(3,006,015.43)	827,596.18	(4,559.68)
Transmission						
353	Substation Equipment	3.8			(0.01)	0.01
General Plant						
390	Structures & Improvements	2.5	(1,494,011.85)	(374,055.06)		
	Revised Adjustments		(1,494,011.85) a	(14,026,236.50) a	689,023.38 a	(19,109.38) a
					$\Sigma a =$	(14,850,334.35)

			H	I	J (D+E+F+G+H+I)
Acct	Description	Depr Rate	2002 Basis Adjustment	2003 Basis Adjustment	Total Basis Adjustment
Other Production - Internal Combustion Engine Plants					
341	Structures & Improvements	2.7	52.63	(52.63)	(51,367.50)
342	Fuel Holders, Producers, & Accessories	6.9	56,178.33	(56,102.32)	(636,499.54)
344	Generators	5.0	365,276.34	(364,845.85)	(8,263,326.09)
345	Accessory Electric Equipment	4.4	151,701.44	(151,527.48)	(1,847,414.92)
346	Miscellaneous Power Plant Equipment	5.0	277,446.87	(279,194.23)	(2,184,726.29)
Transmission					
353	Substation Equipment	3.8	0.03	0.02	0.05
General Plant					
390	Structures & Improvements	2.5	5,397.28	(5,397.29)	(1,868,066.92)
	Revised Adjustments		856,052.92 b	(857,119.78) b	(14,851,401.21)
			$\Sigma b =$	(1,066.86)	

Hawaii Electric Light Company, Inc.
Book Depreciation Accrual - Keahole Depreciation Adjustment
Utilizing Book Depreciation Rates From 1985 Depreciation Study (Docket 5456; Effective 1/1/87)
For 2001 through 2006

The 2001 depreciation adjustment related to the reclassification of portions of the Keahole shop/warehouse, fire protection system and water treatment system should have been based on an accumulated cost basis of \$14,850,334.35 (see page 4 of this response) as opposed to the \$14,856,315.69 basis reflected on HELCO-WP-1206 page 1. Also, an additional \$1,066.86 of costs (\$1,286.81 for H3191000 and -\$219.95 for H3194000) should have been included in the December 2003 reclassification to construction work in progress. The depreciation adjustment related to these changes in the depreciable base is calculated below.

A	B	C	D	E	F	G	
		Dep'r Rate	2001 Adjustment 1999-2000 Book Depreciation	Adjustment to 2001 Dep'r Accrual	Adjustment to 2002 Dep'r Accrual	Adjustment to 2003 Dep'r Accrual	
Acct	Description						
Other Production - Internal Combustion Engine Plants							
341	Structures & Improvements	2.7	(1,375.78)	(1,386.92)			
342	Fuel Holders, Producers, & Accessories	6.9	(40,893.85)	(43,923.71)			
344	Generators	5.0	(412,241.58)	(413,187.83)			
345	Accessory Electric Equipment	4.4	(77,339.46)	(81,293.81)			
346	Miscellaneous Power Plant Equipment	5.0	(150,300.77)	(109,148.95)			
Transmission							
353	Substation Equipment	3.8	-	-			
General Plant							
390	Structures & Improvements	2.5	(84,051.97)	(46,701.67)			
	Revised Adjustments		(766,203.41)	(695,642.99)			
	Original Adjustment already recorded (HELCO-WP-1206 page 1)		(754,177.21)	(696,117.31)			
	Increase (decrease) in depreciation related to the 2001 reclassification		(12,026.20)	474.32	474.32	474.32	
		H	I	J	K (D+E+F+G+I+J)	L	M (K+L)
		Comp Dep'r Rate	Adjustment to 2004 Dep'r Accrual	Adjustment to 2005 Dep'r Accrual	Accumulated Depreciation Adjustment	Adjustment to 2006 Dep'r Accrual	Total Additional Depreciation Adjustment
Acct	Description						
	Increase (decrease) in depreciation related to the 2001 reclassification		474.32	474.32	(9,654.60)	474.32	(9,180.28)
	Increase (decrease) in depreciation related to the 2003 reclassification of \$1,286.81 from H3191000	5.0	(64.34)	(64.34)	(128.68)	(64.34)	(193.02)
	Increase (decrease) in depreciation related to the 2003 reclassification of - \$219.95 from H3194000	5.0	11.00	11.00	22.00	11.00	33.00
	Total depreciation impact		420.98	420.98	(9,761.28)	420.98	(9,340.30)

NOTES:

Column D: (Column D from CA-IR-293 page 4 x Column C x 2 years) + (Column E from CA-IR-293 page 4 x Column C)

Column E: (Columns D+E+F+G from CA-IR-293 page 4 x Column C)

Column F, G, I, J, L: Since the depreciable base numbers in the depreciation accrual was updated in 2001 to account for a \$14,856,315.69 depreciable base decrease, the annual depreciation accrual for years after 2001 need only be adjusted for the depreciation resulting from the difference between the new \$14,851,401 base and the original \$14,856,315.69 base.

Column H: Composite rates as calculated on CA-IR-293 page 6

Hawaii Electric Light Company, Inc.
Annual Depreciation Composite Rates related to H3191000 and H3194000
For 2004 - 2006

H3191000 CT4 Water Treatment System

Plant Addition Vintage	NARUC Account					total
	3420	3440	3450	3460	3530	
1999	811,108.95	5,017,155.51	2,116,981.24	4,029,911.62		11,975,157.32
2000	42,532.72	263,088.27	85,809.71	(828,750.22)	-	(437,319.52)
2001	(541,087.31)	(3,346,922.96)	(1,412,229.12)	(1,623,067.13)	0.01	(6,923,306.51)
2002	53,859.84	333,152.83	140,573.33	267,597.14	0.02	795,183.16
2003	(53,772.69)	(332,613.70)	(140,345.87)	(267,164.11)	0.02	(793,896.35)
total plant additions	312,641.51	1,933,859.95	790,789.29	1,578,527.30	0.05	4,615,818.10

Annual Composite Rate Calculations:

12/31/03 total balances	312,641.51	1,933,859.95	790,789.29	1,578,527.30	0.05	4,615,818.10
book depr rate	0.069	0.050	0.044	0.050	0.025	
2004 book depreciation	21,572.26	96,693.00	34,794.73	78,926.37	-	231,986.36
2004 composite rate						5.0%

2005 - 2006 same as 2004

H3194000 CT5 Water Treatment System

Plant Addition Vintage	NARUC Account					total
	3420	3440	3450	3460	3530	
1999	157,361.22	1,534,153.64	755,292.30	658,946.66		3,105,753.82
2000	11.47	111.75	55.04	47.99	(0.01)	226.24
2001	(93,657.03)	(913,085.62)	(449,529.01)	(392,186.74)	-	(1,848,458.40)
2002	2,318.49	22,603.49	11,128.11	9,708.60	0.01	45,758.70
2003	(2,329.63)	(22,712.14)	(11,181.61)	(9,755.27)		(45,978.65)
total plant additions	63,704.52	621,071.12	305,764.83	266,761.24	-	1,257,301.71

Annual Composite Rate Calculations:

12/31/03 total balances	63,704.52	621,071.12	305,764.83	266,761.24	-	1,257,301.71
book depr rate	0.069	0.050	0.044	0.050	0.025	
2004 book depreciation	4,395.61	31,053.56	13,453.65	13,338.06	-	62,240.88
2004 composite rate						5.0%

2005 - 2006 same as 2004

CA-IR-294

Ref: HELCO-1501 & response to CA-IR-190 (CT-4 & 5 AFUDC).

In response to CA-IR-190(a), the Company provided the monthly cumulative balance of CWIP, including AFUDC, for the period November 1998 through December 2004 between Keahole CT-4, CT-5 and the three categories of common facilities (shop/warehouse, fire protection and waste water). In response to CA-IR-190(b), HELCO referred to and provided a copy of the Company's response to CA-IR-14017, pages 4-5, (Docket No. 99-0207) which contained capital expenditures and capitalized AFUDC on a monthly basis for CT-4 and CT-5 from June 1991 through December 1998. Please provide the following:

- a. Referring to pages 2-3 of the response to CA-IR-190, please provide the amount of capital expenditures for each of the following plant categories by month for the period November 1998 through December 2004: [Note: the information being requested is monthly capital expenditures, not cumulative balances, excluding AFUDC].
 1. CT-4.
 2. CT-5.
 3. Warehouse/shop.
 4. Fire protection system.
 5. Waste water system.
- b. If the information requested in part (a) above is not available, please provide the following:
 1. Please explain why such data is not available in the format requested.
 2. Please identify and describe the information that is reasonably similar to the information requested that is available from HELCO's records.
 3. Please provide a copy of the information identified in response to part (b)(2) above.

HELCO Response:

- a. The monthly activity for Keahole CT-4, CT-5 and the three categories of common facilities is shown in HELCO's response to CA-IR-291, pages 2 – 5. The information at the time CA-IR-190 was requested was not readily available since it was very time consuming to go through the ELLISPE accounting system to retrieve the information by month.

Approximately 24 hours was spent retrieving the information requested.
- b. See response to item a. above.

CA-IR-295

Ref: HELCO-1606, HELCO-WP-1606, page 20, & response to CA-IR-193 (CWC Pension Lag).

CA-IR-193(a) requested a quantification of the working cash effect of assigning a "zero" expense lag to the test year pension expense. In response, HELCO stated that the "zero" payment lag results in "zero" working cash. HELCO-WP-1606, page 20, shows the calculation of a composite expense lag of 39 days for O&M non-labor, including pension expense. Please provide the following:

- a. Please confirm that HELCO-WP-1606, page 20, shows the calculation of a composite expense lag of 39 days for O&M non-labor, including pension expense. If this cannot be confirmed, please explain.
- b. Please confirm that recognition of a "zero" expense lag for pension expense causes the 39 day composite expense lag for O&M non-labor to be lower than it would have been if pension expense had been excluded from this calculation or had been any value greater than "zero." If this cannot be confirmed, please explain.
- c. Please confirm that HELCO-1606 compares a revenue collection lag of 38 days to the 39 day composite expense lag for O&M non-labor in quantifying overall working cash. If this cannot be confirmed, please explain.
- d. Please confirm that if pension expense had been excluded from the calculation of the O&M non-labor expense lag (HELCO-WP-1606, p. 20) or had been any value greater than "zero," the 39 day expense lag would have been higher and would have resulted in the calculation of a lower working cash amount on HELCO-1606. If this cannot be confirmed, please explain.

HELCO Response:

- a. Yes, HELCO-WP-1606, page 20 shows the calculation of a composite expense lag of 39 days for O&M non-labor, including pension expense.
- b. Yes, applying a "zero" day payment lag to the estimated pension expense results in a lower number of payment lag days for O&M non-labor expense than would be calculated if the estimated pension expense was excluded. See Examples 1 and 2 on page 3 for an illustration of this. However, see response to subpart (d) for discussion of a higher number of payment lag days applied to lower O&M non-labor expense. Yes, applying a "zero" day

payment lag to the estimated pension expense also results in a lower number of payment lag days for O&M non-labor expense than would be calculated if the payment lag days were greater than "zero". This is illustrated in Examples 1 and 3 on page 3.

- c. Yes, HELCO-1606 compares a revenue collection lag of 38 days to a payment lag of 39 days in determining the working cash from the test year O&M non-labor expense.
- d. Excluding pension expense from the calculation of the O&M non-labor expense lag results in greater payment lag days as illustrated in Examples 1 and 2 on page 3; however, the greater number of payment lag days applied to the lower non-labor O&M expense (excluding pension expense) may result in no change in net working cash as illustrated in Examples 1 and 2 on pages 3, 4 and 5. In Examples 1 and 2 on pages 3, 4, and 5, the change in working cash results from the impact of the rounding in the non-labor O&M payment lag days. Assuming payment lag days greater than "zero" days is applied to the pension expense in the calculation of the O&M non-labor expense lag, the number of payment lag days would be higher than 39. This is illustrated in Examples 1 and 3 on pages 3, 4 and 6. A higher number of payment lag days applied to the same non-labor O&M expense would result in a decrease in working cash as illustrated in Examples 1 and 3 on pages 4 and 6.

Hawaii Electric Light Company, Inc.
Working Cash Study
O&M Non-Labor Payment Lag
Source: HELCO-WP-1606, page 20.

Example 1 (Original as filed)	Test Year Expense	% of Total	Total Payment	Weighted Average
	(\$000's) Note A		Lag Days HELCO-WP-1606, p. 21-23	
Pension	\$1,773	6%	0	days
OPEB	\$963	3%	0	days
Emission Fees	\$245	1%	324	2 days
EPRI Dues	\$252	1%	-10	days
Other Non-Labor O&M	\$28,681	90%	41	37 days
	<u>\$31,914</u>	<u>100%</u>		

O&M Non-Labor Payment Lag Days 39

Example 2 (Excluding pension expense FOR ILLUSTRATION PURPOSES ONLY)	Test Year Expense	% of Total	Total Payment	Weighted Average
	(\$000's) Note A		Lag Days HELCO-WP-1606, p. 21-23	
Pension	\$0	0%	0	days
OPEB	\$963	3%	0	days
Emission Fees	\$245	1%	324	3 days
EPRI Dues	\$252	1%	-10	days
Other Non-Labor O&M	\$28,681	95%	41	39 days
	<u>\$30,141</u>	<u>100%</u>		

O&M Non-Labor Payment Lag Days
(Excluding pension expense FOR ILLUSTRATION PURPOSES ONLY) 42

Example 3 (10 day payment lag applied to pension FOR ILLUSTRATION PURPOSES ONLY)	Test Year Expense	% of Total	Total Payment	Weighted Average
	(\$000's) Note A		Lag Days HELCO-WP-1606, p. 21-23	
Pension	\$1,773	6%	10	1 days
OPEB	\$963	3%	0	days
Emission Fees	\$245	1%	324	2 days
EPRI Dues	\$252	1%	-10	days
Other Non-Labor O&M	\$28,681	90%	41	37 days
	<u>\$31,914</u>	<u>100%</u>		

O&M Non-Labor Payment Lag Days
(10 day payment lag for pension FOR ILLUSTRATION PURPOSES ONLY) 40

Hawaii Electric Light Company, Inc.
WORKING CASH ITEMS, 2006

(\$ in thousands)

Example 1 (Original as filed)

Source: HELCO-1606

Line Ref.	At Present Rates				At Proposed Rates		
	Annual Amount A	Daily Amount B A/365	Lag Days C	Working Cash D B * C	Annual Amount E	Daily Amount F E/365	Working Cash G C * F
[1] <u>Revenue Collection Lag</u>	279,046	764.5	38.0	29,051	292,302	800.8	30,431
<u>Payment Lag</u>							
[2] Fuel Purchases	78,400	214.8	13.0	2,792	78,400	214.8	2,792
[3] O&M Labor	19,988	54.8	12.0	657	19,988	54.8	657
O&M Non-Labor							
[4] Pension	1,773	4.9	-	-	1,773	4.9	-
[5] OPEB	963	2.6	-	-	963	2.6	-
[6] Emission Fees	245	0.7	324	217	245	0.7	217
[7] EPRI Dues	252	0.7	(10)	(7)	252	0.7	(7)
[8] Other Non-Labor O&M	28,681	78.6	41	3,222	28,681	78.6	3,222
[9] Subtotal O&M Non-Labor	31,914	87.4	39.0	3,410 *	31,914	87.4	3,410 *
[10] Purchased Power	117,318	321.4	37.0	11,893	117,318	321.4	11,893
[11] Revenue Taxes	28,763	78.8	88.0	6,935	31,420	86.1	7,575
[12] Income Taxes	2,663	7.3	162.0	1,182	13,262	36.3	5,886
[13] Total Payment Lag	279,046	764.5		26,869	292,302	800.8	32,213
[14] Net Working Cash				2,183			(1,782)
Net Working Cash per HELCO-1606				2,183			(1,782)
Difference				(0)			0

[9] = [4] + [5] + [6] + [7] + [8]

[13] = [2] + [3] + [9] + [10] + [11] + [12]

[14] = [1] - [13]

* Difference due to rounding in the calculation of the weighted average payment lag for O&M Non-Labor.

Hawaii Electric Light Company, Inc.
WORKING CASH ITEMS, 2006

(\$ in thousands)

Example 2 (Excluding pension expense FOR ILLUSTRATION PURPOSES ONLY)

Source: HELCO-1606

Line Ref.	At Present Rates				At Proposed Rates		
	Annual Amount A	Daily Amount B A/365	Lag Days C	Working Cash D B * C	Annual Amount E	Daily Amount F E/365	Working Cash G C * F
[1] <u>Revenue Collection Lag</u>	279,046	764.5	38.0	29,051	292,302	800.8	30,431
<u>Payment Lag</u>							
[2] Fuel Purchases	78,400	214.8	13.0	2,792	78,400	214.8	2,792
[3] O&M Labor	19,988	54.8	12.0	657	19,988	54.8	657
O&M Non-Labor							
[4] Pension		-	-	-	-	-	-
[5] OPEB	963	2.6	-	-	963	2.6	-
[6] Emission Fees	245	0.7	324	217	245	0.7	217
[7] EPRI Dues	252	0.7	(10)	(7)	252	0.7	(7)
[8] Other Non-Labor O&M	28,681	78.6	41	3,222	28,681	78.6	3,222
[9] Subtotal O&M Non-Labor	30,141	82.6	42.0	3,468	30,141	82.6	3,468
[10] Purchased Power	117,318	321.4	37.0	11,893	117,318	321.4	11,893
[11] Revenue Taxes	28,763	78.8	88.0	6,935	31,420	86.1	7,575
[12] Income Taxes	2,663	7.3	162.0	1,182	13,262	36.3	5,886
[13] Total Payment Lag	277,273	759.7		26,927	290,529	796.0	32,272
[14] Net Working Cash				2,125			(1,840)
Net Working Cash per HELCO-1606				2,183			(1,782)
Difference				(58)			(58)

[9] = [4] + [5] + [6] + [7] + [8]

[13] = [2] + [3] + [9] + [10] + [11] + [12]

[14] = [1] - [13]

* Difference due to rounding in the calculation of the weighted average payment lag for O&M Non-Labor.

Hawaii Electric Light Company, Inc.
WORKING CASH ITEMS, 2006

(\$ in thousands)

Example 3 (10 day payment lag applied to pension FOR ILLUSTRATION PURPOSES ONLY)

Source: HELCO-1606

Line Ref.	At Present Rates				At Proposed Rates		
	Annual Amount A	Daily Amount B A/365	Lag Days C	Working Cash D B * C	Annual Amount E	Daily Amount F E/365	Working Cash G C * F
[1] <u>Revenue Collection Lag</u>	279,046	764.5	38.0	29,051	292,302	800.8	30,431
<u>Payment Lag</u>							
[2] Fuel Purchases	78,400	214.8	13.0	2,792	78,400	214.8	2,792
[3] O&M Labor	19,988	54.8	12.0	657	19,988	54.8	657
O&M Non-Labor							
[4] Pension	1,773	4.9	10.0	49	1,773	4.9	49
[5] OPEB	963	2.6	-	-	963	2.6	-
[6] Emission Fees	245	0.7	324	217	245	0.7	217
[7] EPRI Dues	252	0.7	(10)	(7)	252	0.7	(7)
[8] Other Non-Labor O&M	28,681	78.6	41	3,222	28,681	78.6	3,222
[9] Subtotal O&M Non-Labor	31,914	87.4	40.0	3,497 *	31,914	87.4	3,497 *
[10] Purchased Power	117,318	321.4	37.0	11,893	117,318	321.4	11,893
[11] Revenue Taxes	28,763	78.8	88.0	6,935	31,420	86.1	7,575
[12] Income Taxes	2,663	7.3	162.0	1,182	13,262	36.3	5,886
[13] Total Payment Lag	279,046	764.5		26,956	292,302	800.8	32,301
[14] Net Working Cash				2,095			(1,869)
Net Working Cash per HELCO-1606				2,183			(1,782)
Difference				(88)			(87)

[9] = [4] + [5] + [6] + [7] + [8]

[13] = [2] + [3] + [9] + [10] + [11] + [12]

[14] = [1] - [13]

* Difference due to rounding in the calculation of the weighted average payment lag for O&M Non-Labor.

CA-IR-296

Ref: HELCO-1606, HELCO-WP-1606, page 20, & response to CA-IR-194 (CWC OPEB Lag).

CA-IR-194(a) requested a quantification of the working cash effect of assigning a "zero" expense lag to the test year OPEB expense. In response, HELCO stated that the "zero" payment lag results in "zero" working cash. HELCO-WP-1606, page 20, shows the calculation of a composite expense lag of 39 days for O&M non-labor, including OPEB expense. Please provide the following:

- a. Please confirm that HELCO-WP-1606, page 20, shows the calculation of a composite expense lag of 39 days for O&M non-labor, including OPEB expense. If this cannot be confirmed, please explain.
- b. Please confirm that recognition of a "zero" expense lag for the OPEB expense causes the 39 day composite expense lag for O&M non-labor to be lower than it would have been if OPEB expense had been excluded from this calculation or had been any value greater than "zero". If this cannot be confirmed, please explain.
- c. Please confirm that HELCO-1606 compares a revenue collection lag of 38 days to the 39 day composite expense lag for O&M non-labor in quantifying overall working cash. If this cannot be confirmed, please explain.
- d. Please confirm that if the OPEB expense had been excluded from the calculation of the O&M non-labor expense lag (HELCO-WP-1606, p. 20) or had been any value greater than "zero," the 39 day expense lag would have been higher and would have resulted in the calculation of a lower working cash amount on HELCO-1606. If this cannot be confirmed, please explain

HELCO Response:

- a. Yes, HELCO-WP-1606, page 20 shows the calculation of a composite expense lag of 39 days for O&M non-labor, including OPEB expense.
- b. Yes, applying a "zero" day payment lag to the estimated OPEB expense results in a lower number of payment lag days for O&M non-labor expense than would be calculated if the estimated OPEB expense was excluded. See Examples 1 and 2 on page 3 for an illustration of this. However, see response to subpart (d) for discussion of a higher number of payment lag days applied to lower O&M non-labor expense. Yes, applying a "zero" day payment lag

to the estimated OPEB expense also results in a lower number of payment lag days for O&M non-labor expense than would be calculated if the payment lag days were greater than "zero". This is illustrated in Examples 1 and 3 on page 3.

- c. Yes, HELCO-1606 compares a revenue collection lag of 38 days to a payment lag of 39 days in determining the working cash from the test year O&M non-labor expense.
- d. Excluding OPEB expense from the calculation of the O&M non-labor expense lag results in greater payment lag days as illustrated in Examples 1 and 2 on page 3; however, the greater number of payment lag days applied to the lower non-labor O&M expense (excluding OPEB expense) may result in no change in net working cash as illustrated in Examples 1 and 2 on pages 3, 4 and 5. In Examples 1 and 2 on pages 3, 4, and 5, the change in working cash results from the impact of the rounding in the non-labor O&M payment lag days. Assuming payment lag days greater than "zero" days is applied to the OPEB expense in the calculation of the O&M non-labor expense lag, the number of payment lag days would be higher than 39. This is illustrated in Examples 1 and 3 on pages 3, 4 and 6. A higher number of payment lag days applied to the same non-labor O&M expense would result in a decrease in working cash as illustrated in Examples 1 and 3 on pages 4 and 6.

Hawaii Electric Light Company, Inc.
Working Cash Study
O&M Non-Labor Payment Lag
Source: HELCO-WP-1606, page 20.

Example 1 (Original as filed)	Test Year Expense	% of Total	Total Payment	Weighted Average
	(\$000's) Note A		Lag Days HELCO-WP-1606, p. 21-23	
Pension	\$1,773	6%	0	days
OPEB	\$963	3%	0	days
Emission Fees	\$245	1%	324	2 days
EPRI Dues	\$252	1%	-10	days
Other Non-Labor O&M	\$28,681	90%	41	37 days
	<u>\$31,914</u>	<u>100%</u>		

O&M Non-Labor Payment Lag Days **39**

**Example 2 (Excluding OPEB expense
FOR ILLUSTRATION PURPOSES
ONLY)**

	Test Year Expense	% of Total	Total Payment	Weighted Average
	(\$000's) Note A		Lag Days HELCO-WP-1606, p. 21-23	
Pension	\$1,773	6%	0	days
OPEB	\$0	0%	0	days
Emission Fees	\$245	1%	324	3 days
EPRI Dues	\$252	1%	-10	days
Other Non-Labor O&M	\$28,681	93%	41	38 days
	<u>\$30,951</u>	<u>100%</u>		

O&M Non-Labor Payment Lag Days
(Excluding OPEB expense FOR ILLUSTRATION PURPOSES ONLY) **41**

**Example 3 (10 day payment lag
applied to OPEB FOR
ILLUSTRATION PURPOSES
ONLY)**

	Test Year Expense	% of Total	Total Payment	Weighted Average
	(\$000's) Note A		Lag Days HELCO-WP-1606, p. 21-23	
Pension	\$1,773	6%	0	days
OPEB	\$963	3%	10	days
Emission Fees	\$245	1%	324	2 days
EPRI Dues	\$252	1%	-10	days
Other Non-Labor O&M	\$28,681	90%	41	37 days
	<u>\$31,914</u>	<u>100%</u>		

O&M Non-Labor Payment Lag Days
(10 day payment lag for OPEB FOR ILLUSTRATION PURPOSES ONLY) **40**

Hawaii Electric Light Company, Inc.
WORKING CASH ITEMS, 2006

(\$ in thousands)

Example 1 (Original as filed)

Source: HELCO-1606

Line Ref.	At Present Rates				At Proposed Rates		
	Annual Amount A	Daily Amount B A/365	Lag Days C	Working Cash D B * C	Annual Amount E	Daily Amount F E/365	Working Cash G C * F
[1] <u>Revenue Collection Lag</u>	279,046	764.5	38.0	29,051	292,302	800.8	30,431
<u>Payment Lag</u>							
[2] Fuel Purchases	78,400	214.8	13.0	2,792	78,400	214.8	2,792
[3] O&M Labor	19,988	54.8	12.0	657	19,988	54.8	657
O&M Non-Labor							
[4] Pension	1,773	4.9	-	-	1,773	4.9	-
[5] OPEB	963	2.6	-	-	963	2.6	-
[6] Emission Fees	245	0.7	324	217	245	0.7	217
[7] EPRI Dues	252	0.7	(10)	(7)	252	0.7	(7)
[8] Other Non-Labor O&M	28,681	78.6	41	3,222	28,681	78.6	3,222
[9] Subtotal O&M Non-Labor	31,914	87.4	39.0	3,410	31,914	87.4	3,410
[10] Purchased Power	117,318	321.4	37.0	11,893	117,318	321.4	11,893
[11] Revenue Taxes	28,763	78.8	88.0	6,935	31,420	86.1	7,575
[12] Income Taxes	2,663	7.3	162.0	1,182	13,262	36.3	5,886
[13] Total Payment Lag	279,046	764.5		26,869	292,302	800.8	32,213
[14] Net Working Cash				2,183			(1,782)
Net Working Cash per HELCO-1606				2,183			(1,782)
Difference				(0)			0

[9] = [4] + [5] + [6] + [7] + [8]

[13] = [2] + [3] + [9] + [10] + [11] + [12]

[14] = [1] - [13]

* Difference due to rounding in the calculation of the weighted average payment lag for O&M Non-Labor.

Hawaii Electric Light Company, Inc.
WORKING CASH ITEMS, 2006

(\$ in thousands)

Example 2 (Excluding OPEB expense FOR ILLUSTRATION PURPOSES ONLY)

Source: HELCO-1606

Line Ref.	At Present Rates				At Proposed Rates		
	Annual Amount A	Daily Amount B A/365	Lag Days C	Working Cash D B * C	Annual Amount E	Daily Amount F E/365	Working Cash G C * F
[1] <u>Revenue Collection Lag</u>	279,046	764.5	38.0	29,051	292,302	800.8	30,431
<u>Payment Lag</u>							
[2] Fuel Purchases	78,400	214.8	13.0	2,792	78,400	214.8	2,792
[3] O&M Labor	19,988	54.8	12.0	657	19,988	54.8	657
O&M Non-Labor							
[4] Pension	1,773	4.9	-	-	1,773	4.9	-
[5] OPEB	-	-	-	-	-	-	-
[6] Emission Fees	245	0.7	324	217	245	0.7	217
[7] EPRI Dues	252	0.7	(10)	(7)	252	0.7	(7)
[8] Other Non-Labor O&M	28,681	78.6	41	3,222	28,681	78.6	3,222
[9] Subtotal O&M Non-Labor	30,951	84.8	40.0	3,392 *	30,951	84.8	3,392 *
[10] Purchased Power	117,318	321.4	37.0	11,893	117,318	321.4	11,893
[11] Revenue Taxes	28,763	78.8	88.0	6,935	31,420	86.1	7,575
[12] Income Taxes	2,663	7.3	162.0	1,182	13,262	36.3	5,886
[13] Total Payment Lag	278,083	761.9		26,850	291,339	798.2	32,195
[14] Net Working Cash				2,201			(1,764)
Net Working Cash per HELCO-1606				2,183			(1,782)
Difference				18			18

[9] = [4] + [5] + [6] + [7] + [8]

[13] = [2] + [3] + [9] + [10] + [11] + [12]

[14] = [1] - [13]

* Difference due to rounding in the calculation of the weighted average payment lag for O&M Non-Labor.

Hawaii Electric Light Company, Inc.
WORKING CASH ITEMS, 2006

(\$ in thousands)

Example 3 (10 day payment lag applied to OPEB FOR ILLUSTRATION PURPOSES ONLY)

Source: HELCO-1606

Line Ref.	At Present Rates				At Proposed Rates		
	Annual Amount A	Daily Amount B A/365	Lag Days C	Working Cash D B * C	Annual Amount E	Daily Amount F E/365	Working Cash G C * F
[1] <u>Revenue Collection Lag</u>	279,046	764.5	38.0	29,051	292,302	800.8	30,431
<u>Payment Lag</u>							
[2] Fuel Purchases	78,400	214.8	13.0	2,792	78,400	214.8	2,792
[3] O&M Labor	19,988	54.8	12.0	657	19,988	54.8	657
O&M Non-Labor							
[4] Pension	1,773	4.9	-	-	1,773	4.9	-
[5] OPEB	963	2.6	10.0	26	963	2.6	26
[6] Emission Fees	245	0.7	324	217	245	0.7	217
[7] EPRI Dues	252	0.7	(10)	(7)	252	0.7	(7)
[8] Other Non-Labor O&M	28,681	78.6	41	3,222	28,681	78.6	3,222
[9] Subtotal O&M Non-Labor	31,914	87.4	40.0	3,497	31,914	87.4	3,497
[10] Purchased Power	117,318	321.4	37.0	11,893	117,318	321.4	11,893
[11] Revenue Taxes	28,763	78.8	88.0	6,935	31,420	86.1	7,575
[12] Income Taxes	2,663	7.3	162.0	1,182	13,262	36.3	5,886
[13] Total Payment Lag	279,046	764.5		26,956	292,302	800.8	32,301
[14] Net Working Cash				2,095			(1,869)
Net Working Cash per HELCO-1606				2,183			(1,782)
Difference				(88)			(87)

[9] = [4] + [5] + [6] + [7] + [8]

[13] = [2] + [3] + [9] + [10] + [11] + [12]

[14] = [1] - [13]

* Difference due to rounding in the calculation of the weighted average payment lag for O&M Non-Labor.

CA-IR-297

Ref: HELCO-1606 & response to CA-IR-193 (CWC Pension Lag).

- a. Referring to HELCO-1606, does the O&M Non-labor annual amount of \$31,914,000 (Column D) include pension and OPEB expense?
- b. If so, please provide the amount of each such item included therein.
- c. If not, please explain why such items were excluded from the calculation of the \$31,914,000.

HELCO Response:

- a. Yes.
- b. As illustrated in HELCO-WP-1606 page 20, the test year O&M non-labor expense includes estimated pension expense of \$1,773,000 and estimated OPEB expense of \$963,000.
- c. Not applicable.

CA-IR-298

Ref: T-19, page 11, lines 6-9.

According to the cited testimony, "Many of the costs residential customers impose on HELCO are a function of their maximum demand rather than energy usage level. For example, equipment such as distribution line drops, transformers, feeders and substations are sized to meet maximum demands placed upon the equipment." In contrast, Mr. Young's cost of service allocations (see HELCO WP-3001, page 82) treat a large percentage of such costs as being caused by the existence of a "customer," rather than relative "maximum demand" levels. Please explain this apparent inconsistency and state whether Mr. Orans disagrees with Mr. Young's customer component classification results with respect to distribution plant investment and expense.

HELCO Response:

When HELCO connects a customer, it incurs minimum costs to provide electricity access by the customer at HELCO's distribution voltage level. However, the total cost of serving a residential customer, besides energy, also includes kW-dependent components (e.g., distribution line drops, transformers, feeders and substations). For example, a transformer is sized to reliably and safely meet the total non-coincident kW demand of the customers linked to the transformer. To the extent that residential customers are similar in per customer kW demand, sizing a transformer to serve the total kW demand (= per customer kW demand x number of customers) is similar to sizing the transformer to serve the total number of customers. Hence, Mr. Young's cost of service allocation method is consistent with Dr. Orans' statement under the assumption that most residential customers place relatively similar demands on the major components of the distribution system.

CA-IR-299

Ref: T-19, page 6, lines 12-14, income gap and affordability.

According to the cited testimony, "The Big Island has a wide gap between lowest and highest income electricity consumers. HELCO's high residential rates are a likely burden for many customers." Does Mr.Orans or HELCO believe that there is any correlation between relative income levels on the Big Island and the level of residential usage per customer? Please explain and provide copies of all documentation supportive of your response.

HELCO Response:

Yes, Dr. Orans does believe that there is a positive correlation between electricity consumption and income for residential customers in general. Although he has not completed any specific studies to confirm this relationship on the Big Island, an extensive literature survey from the US Department of Energy indicates that residential electricity consumption is positively correlated with income because residential electricity demand has positive income elasticity. This result is confirmed from a number of different studies and locations. If these industry wide results also apply to the Big Island, the Big Island's wide income gap implies a large consumption gap between the lowest and highest income customers.

The consumption gap, however, does not mean an equal-cent per kWh rate increase would impose an equal burden on both high- and low-income customers. Such a rate increase would have a larger budgetary impact on a low-income customer than a high-income customer, primarily because electricity expense constitutes a relatively larger share of a low-income customer's monthly budget. As a result, a rate design that spreads costs on an equal cents per KWh basis would have an adverse affordability effect on a low-income customer when compared to a high-income customer.

The referenced literature survey from the US Department of Energy may be accessed directly (ftp://ftp.eia.doe.gov/pub/oiaf/elasticitysurvey/elasticitysurvey_dahl.pdf).



CA-IR-300

Ref: T-20, page 51, REEEPAAH Funding.

Please provide a specimen copy of the "30-day notice filing for each project or program expenditure" that HELCO intends to make under the proposed REEEPAAH program, indicating the type of detailed information that will be provided within such filings.

HELCO Response:

The requested information is currently not available. HELCO has not developed a sample filing form for REEEPAAH expenditures, but such a filing will likely identify the recipient, the amount of the expenditure, the timing of the expenditure, the nature of the expenditure, projected energy savings, and the affordable housing development, among other details.

CA-IR-301

Ref: T-20, page 51, REEEPAAH Funding.

Please explain whether and why HELCO believes that the utility, rather than its customers (through charitable donations) or the government agencies serving its customers, would be better positioned to design programs and collect funding to support the development of affordable homes on the Big Island.

HELCO Response:

See HELCO's response to CA-IR-239.

CA-IR-302

Ref: T-20, page 12, Allocation of Embedded Costs.

- a. Are any HELCO electric plant facilities dedicated to serve specific individual customers, such that a direct assignment, rather than allocation of costs is appropriate?
- b. Please explain any affirmative response to part (a) of this information request and specify the amounts of such dedicated plant investment by NARUC account.
- c. Provide details of the specific assignments of cost that have been made in the Company's cost of service study (if any).

HELCO Response:

- a. There are no current HELCO electric plant facilities dedicated to serve specific individual customers. In addition, in the HELCO cost of service study, total system costs are allocated across the six rate classes based on the class allocation factors, as shown in HELCO-2011.
- b. Not applicable.
- c. None. See HELCO's response to part (a) above.

CA-IR-303

Ref: T-20, page 34, Rider I.

- a. Has HELCO served any customers under its Interruptible Contract Rider I in the past 10 years?
- b. Please explain any affirmative response to part (a) of this information request and provide a copy of all service contracts that were effective.
- c. If your response to part (b) of this information request is negative, please explain:
 1. HELCO's intended use for Rider I, and
 2. How the amount of reduction in demand charges would be determined.
 3. Why Rider I should continue to be available in the Company's tariff.

HELCO Response:

- a. No.
- b. Not applicable.
- c.
 1. HELCO's intends for Rider I to provide an option to customers for interruptible service.
 2. The amount of the reduction in demand charges would be defined in the customer's Rider I service contract. The reduction would take the form of an adjustment to the customer's billing demand. The amount of the reduction would be based on an estimate of the bill savings required to encourage the customer to take on an interruptible service contract. In the past, for HECO Rider I customers, that reduction has been about 30% of maximum measured demand.
 3. The offer of an interruptible service option can provide benefits both to customers in the form of reduced energy bills and to the HELCO system in the form of a reduction of the system load that must be planned for.

CA-IR-304

Ref: T-20, pages 26 and 27, Schedule H and K Service.

- a. Please explain the origin of HELCO Schedule H and K Service.
- b. Provide illustrative calculations of typical customer impacts from taking service on Schedule H/K, rather than the corresponding applicable rate schedule if this end-use rate were no longer available.
- c. Please explain why HELCO has determined that it should close Schedule H and plan for a transition for the existing Schedule H customers.
- d. For what reasons should existing Schedule H customers be allowed to “relocate” their Schedule H service?
- e. For what reasons should existing Schedule K customers not be allowed to “relocate” their Schedule K service?
- f. Please provide complete copies of all studies, workpapers, analyses, projections, market evaluations, workpapers and other documents prepared by or for HELCO to evaluate rate and tariff treatment of Schedule H and K service since January 1, 2005.

HELCO Response:

- a. A discounted rate for commercial cooking, heating, air conditioning, and refrigeration service has been a part of HELCO’s and HELCO’s predecessor’s rate schedules since at least 1950.

See the attached Schedule “C” and compare to the attached Schedule “P” from Hilo Electric Light Company, Ltd., effective November 1, 1950.
- b. If Schedule H/K were no longer available, customers with loads of 25 kW or less and energy usage of 5,000 kWh per month or less would be served on Schedule G. Customers with loads in excess of 25 kW or energy usages in excess of 5,000 kWh per month would be served on Schedule J. Schedule H bills of 25 kW or less and 5,000 kWh or less on HELCO-2018, page 7 can be compared to Schedule G bills of equal kWh on HELCO-2018, page 3. For Schedule H/K customers whose measured demands exceed 25 kW, a comparison of Schedule H/K bills to Schedule J bills is not readily available, and must be done on a case-by-case basis. The reason is that kW load that is excluded from billing on Schedule H/K (cooking, heating, waterheating) is counted as billed kW on Schedule J.

- c. HELCO has determined that Schedule H should be closed and a transition for existing Schedule H customers should be planned for because HELCO seeks to align and simplify the standard commercial rate schedules offered. In this case, HELCO has proposed to modify the availability of Schedule J so that it serves customers with kW loads greater than 25 kW and less than 200 kW, and has proposed to modify the availability of Schedule P so that it serves customers with loads of 200 kW or more (see HELCO T-20, pages 22-29). So Schedule G will serve the smallest customers only, Schedule P will serve the largest customers only, and Schedule J will serve all the customers in-between. Schedule H, which represents only 1.5% of the test year sales and 0.4% of the test year customers (see HELCO-201 and HELCO-202) no longer serves a significant segment of commercial customers.
- d. The proposed modification to Schedule H allows existing Schedule H customers to “relocate” their Schedule H service in order to also give Schedule H customers an opportunity to plan for the eventual transition of their existing Schedule H service.
- e. Since Schedule “K” service has been closed to new customers since 1992, HELCO reasons that existing Schedule “K” customers are well aware that new service in excess of 25 kW would be provided on Schedule J. All Schedule “K” customers effectively have been in a transition period since 1992, and an extension of that period is not necessary.
- f. There are no studies, workpapers, analyses, or other documents prepared by or for HELCO to evaluate the rate and tariff treatment of Schedule H/K service.

Superseding Revised Sheet No. 7
Effective November 1, 1948

REVISED SHEET No. 7

Effective November 1, 1950

SCHEDULE "C"

Commercial Cooking, Heating, Air Conditioning and Refrigeration Service

Availability:

Applicable to all commercial consumers having electric heat appliances such as ranges, water heaters, etc. and/or refrigeration and air conditioning. Incidental power service in connection with electric heat and refrigeration service where motors not exceeding one h.p. in size are used, can be supplied under this schedule. This rate is not available for residential consumption. No lighting, except incidental lighting in self contained unit refrigerated cases, will be supplied under this schedule. This rate is not applicable to manufacturing and processing plants.

Rate:

First	100 k.w.h. per meter per month	5.5¢ per k.w.h.
Next	200 k.w.h. per meter per month	4.0¢ per k.w.h.
Next	100 k.w.h. per meter per month	3.0¢ per k.w.h.
All over 400 k.w.h.	per meter per month	2.0¢ per k.w.h.

Minimum Charge:

\$2.00 per meter per month.

If the connected refrigeration and incidental motor load exceeds 2 h.p., the minimum charge will be increased \$1.00 per month for each additional horsepower or fraction thereof.

Terms of Payment:

All rates on this tariff are net and payable within 15 days after the bill has been rendered. Any customer whose bill is not paid within 30 days after the statement is rendered will be considered delinquent and subject to disconnection of service.

Extension of Service:

All applicants for service under this tariff requiring an extension for service in excess of one span (approximately 150 feet) will be required to pay an amount to be agreed upon between the applicant and the Company, but not to exceed actual cost of the extension subject to the Rules and Regulations as filed.

Special Service:

Applicants for special, or underground service under this tariff will be required to pay for such service, not to exceed the actual cost of same.

Superseding Revised Sheet No. 10
Effective May 1, 1948

REVISED SHEET No. 10

Effective November 1, 1950

SCHEDULE "P"
General Power Service

Availability:

Available to all customers using the Company's standard service for power purposes, having one h.p. of connected load or more. Service supplied under this rate is subject to the Rules and Regulations of the Company applicable thereto. (This rate is not available to new consumers or for new installations after November 1, 1948.—See schedule P-3).

Rate:

First	850 k.w.h. per meter per month	5.5¢ per k.w.h.
Next	3150 k.w.h. per meter per month	4.0¢ per k.w.h.
Next	6,000 k.w.h. per meter per month	3.0¢ per k.w.h.
All over 10,000	k.w.h. per meter per month	2.0¢ per k.w.h.

Minimum Charge:

\$0.60 per month per connected horsepower but not less than \$3.00 per meter per month.

Power Factor:

The above rates are based upon an average power factor of 85%. If the power factor is found to average below 85%, 1% shall be added to the demand charge for each 1% of average power factor below 85%—up to a maximum of 50%. If the power factor is found to average above 85%, 1% shall be deducted from the demand charge for each 1% of average power factor above 85%—up to the maximum of 15%. The average monthly power factor shall be determined by a computation from the readings of a reactive KVA-H meter and a KW-H meter. In any case where the power factor is likely to be leading at any time, the reactive KVA-H meter may be ratcheted to prevent reversal.

No adjustment will be made for power factor where the installed capacity is less than 25 horsepower. The demand charge will be based on a rate of \$0.60 per connected horsepower per meter per month.

Oil Clause:

The above rates are based on the cost to the Company of Fuel Oil delivered in its service tanks at one dollar and seventy-five cents (\$1.75) per barrel. For each advance of one whole cent (1¢) per barrel in excess of two dollars (\$2.00) per barrel cost of fuel oil, an additional charge of \$.00005 per kwh will be made for all energy supplied in excess of 3000 kwh per month. For each reduction of one whole cent (1¢) per barrel below one dollar and fifty cents (\$1.50) per barrel cost of fuel oil, a deduction of \$.00005 per kwh will be made for all energy supplied in excess of 3000 kwh per month. The revision in the effective rates following a change in the cost of fuel oil shall be made effective on all billings after the first of the month following said change in cost of fuel oil.

Terms of Payment:

All rates on this tariff are net and payable within 15 days after the bill has been rendered. Any customer whose bill is not paid within 30 days after the statement is rendered will be considered delinquent and subject to disconnection of service.

Extension of Service:

All applicants for service under this tariff requiring an extension for service in excess of one span (approximately 150 feet) will be required to pay an amount to be agreed upon between the applicant and the Company, but not to exceed actual cost of the extension subject to the Rules and Regulations as filed.

Special Service:

Applicants for special, or underground service under this tariff will be required to pay for such service, not to exceed the actual cost of same.

HILO ELECTRIC LIGHT COMPANY, LIMITED

CA-IR-305

Ref: T-20, page 34, line 21; Rider A Standby Charges.

According to the testimony, "The proposed Standby Demand Charges and Scheduled Maintenance Service Energy charges for Schedule J and Schedule P were determined using the same derivation that the company used in its final Standby Service Rider Proposal in Docket No. 99-0207, as shown in HELCO-WP-2001." Please provide the following information:

- a. Provide copies of the documents and calculations relied upon to determine the proposed Standby Demand and Schedule Maintenance Energy rate levels, including specific amounts from HELCO-WP-2001 that were employed.
- b. Please provide complete copies of all documents associated with any HELCO-proposed modifications to the proposed Rider A rates based upon the Commission's Decision and Order No. 22248, as referenced at page 36 of T-20.

HELCO Response:

- a. See the attached pages 2-3 of this response which are Exhibits 1 and 2 from Docket No. 99-0207, HELCO's Final Standby Service Rider Proposal and Supporting Statement, filed January 24, 2001, which illustrates the settlement calculation of the Scheduled Maintenance Energy Rate and the Stipulated Standby Demand Charge for HELCO. The proposed Standby Demand Charges and Scheduled Maintenance Service Energy charges for Schedule J and Schedule P, shown on HELCO-WP-2001, pages 79-80, were determined using this same derivation method, updated for the cost-of-service filed in this docket. The proposed standby charge and scheduled maintenance energy charges were based on the revenue requirements at equal rates of return shown on HELCO-WP-2001, pages 8-9.
- b. The complete copy of the requested document dated August 28, 2006, is voluminous and is available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the requested information. However, the transmittal letter and the attachments related to HELCO are included in this response.

Hawaii Electric Light Company, Inc.
Docket No. 99-0207

Determination of Scheduled Maintenance Energy Rate

		Sch. J (A)	Sch. P (B)	Combined (C = A + B)
L1	Energy Charge Revenues	\$19,260,600 ¹	\$18,306,700 ⁴	\$37,567,300
L2	<u>Adjustments</u>	<u>(\$928,800) ²</u>	<u>(\$2,067,400) ⁵</u>	<u>(\$2,996,200)</u>
L3 = L1 - L2	Adjusted Revenues	\$20,189,400	\$20,374,100	\$40,563,500
L4	Sales kWh	242,300,000 ³	235,500,000 ⁶	477,800,000
L5 = L3 + L4 x 100	Cents Per kWh	8.3	8.7	8.5

^{1,4} HELCO-RWP-1801, Page 8.

^{2,3} HELCO-R-302, Page 3.

^{5,6} HELCO-R-302, Page 5.

Hawaii Electric Light Company, Inc.
Docket No. 99-0207

Stipulated Standby Demand Charge

		Total Costs at Equal Rates of Return ¹			Wld Avg Cost per kW (d = c ÷ MW)	% of Cost Applied (e)	Derived Standby Rate per kW (f = d x e)
		In \$000s					
		Sch. J (a)	Sch. P (b)	Total (c = a + b)			
L1	Generation Demand	\$14,834.6	\$11,349.4	\$26,184.0	\$20.34	20%	\$4.07
L2	Transmission Demand	\$3,822.4	\$2,912.5	\$6,734.9	\$5.23	— ³	\$2.72
L3	Distribution Demand	<u>\$3,928.6</u>	<u>\$2,035.4</u>	<u>\$5,965.0</u>	\$4.63	100%	<u>\$4.63</u>
L4 = sum(L1..L3)	Total	<u>\$22,586.6</u>	<u>\$16,297.3</u>	<u>\$38,883.9</u>	\$30.20		<u>\$11.42</u>
Unitizing Factors ²						rounded	<u>\$11.40</u>
L5	Non-Coincident Sales MW	813.2	473.8	1287.0			

¹ HELCO-RWP-1801, page 8.

² HELCO-RWP-1801, page 9.

³ 60% of Transmission Demand Cost treated as Generation demand cost, and
40% of Transmission Demand Cost treated as Distribution demand cost
[(5.23 × .60) × 20%] + [(5.23 × .40) × 100%].



August 28, 2006

William A. Bonnet
Vice President
Government & Community Affairs

The Honorable Chairman and Members of
the Hawaii Public Utilities Commission
465 South King Street
Kekuanaoa Building, 1st Floor
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 03-0371
Proceeding to Investigate Distributed Generation in Hawaii

This letter sets forth the proposed standby rate tariffs of Hawaiian Electric Company, Inc. ("HECO"), Hawaii Electric Light Company, Inc. ("HELCO"), and Maui Electric Company, Limited ("MECO"). The proposed tariffs result from the Companies'¹ review and consideration of the requirements that were included in Decision and Order No. 22248 ("D&O 22248"), filed January 27, 2006 in the subject docket, as discussed below.

D&O 22248 ordered the Companies to file proposed standby rate tariffs within 6 months of the issuance of said decision and order. D&O 22248 also stated that the HELCO's current Rider A shall continue in effect until the proposed standby rate tariffs included herein are approved by the Commission.

On July 27, 2006 the Companies requested a one-month extension until August 28, 2006 to file their proposed standby rate tariffs.²

Attached is Attachment A which includes the proposed standby tariff rate sheets for HECO, HELCO, and MECO, including separate standby rates for Maui, Lanai, and Molokai divisions. Attachment B includes the derivation of the rates used in the proposed standby rate tariffs. Attachment C includes illustrations of the standby rate billing calculations based on the proposed tariffs. Attachment D includes copies of standby rate tariffs from other jurisdictions that are similar to the standby rate tariffs proposed by the Companies herein.

¹ HECO, HELCO, and MECO are sometimes referred to collectively as the "Companies".

² By letter dated July 21, 2006, the Commission approved Kauai Island Utility Cooperative's July 18, 2006 request for an extension of time, until November 27, 2006, to file its proposed unbundled standby rate tariffs.

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The Honorable Chairman and Members of
the Hawaii Public Utilities Commission
August 28, 2006
Page 2

The Commission required each utility "to establish, by proposed tariff for commission approval, standby rates based on unbundled costs associated with providing each service (i.e., generation, distribution, transmission and ancillary services). The unbundled rates should represent, identify, and quantify the costs of providing standby services to distributed generation customers, with the costs based on each utility's latest recorded results for the most recently completed fiscal year, or other means acceptable to the commission." (D&O No. 22248, Docket No. 03-0371, at 42).

A summary of the significant elements of the standby rate proposals follows below.

Standby Rate Proposal

1. Structure

Standby service is the power service that the Company is obligated to stand ready to supply when the customer's non-utility power source(s) is unavailable for service. Standby service refers to power service that the Company provides during both unscheduled outages (known as "backup service") and scheduled maintenance periods. Supplemental service is the power service supplied by the Company in addition to the customer's electric power requirements normally obtained from its non-utility power source(s).

Standby service shall be assessed a standby demand charge, which includes a reservation demand charge and a daily demand charge, and a standby energy charge. Customers will indicate a contract standby kW quantity that will be assessed the reservation charge. Standby demand will be billed on a daily basis, which allows the customer to manage the standby service kW required and the standby service expense. Standby service customers will also be billed for the standby kWh energy that they require. Supplemental service demand (kW) and supplemental service energy (kWh) will be charged under the otherwise applicable regular commercial rate schedule. During scheduled maintenance periods, the standby daily demand charge will be waived.

The proposed standby service rate design requires installation of interval metering for both the utility's revenue meter and on the customer's generation equipment. This dual metering allows the Company to distinguish between standby service requirements and supplemental service requirements in order to bill those services respective demand and energy charges separately.

Examples of utilities with similarly structured standby rate tariffs include Florida Power & Light and Progress Energy (Florida). The standby rate tariffs for these utilities are included in this filing as Attachment D.



The Honorable Chairman and Members of
the Hawaii Public Utilities Commission
August 28, 2006
Page 3

2. Standby Service Rate Design

Reservation Demand Charge
\$/Contract Demand (kW)

The billing of this charge is based on the greater of the contract standby kW demand or the maximum load served by the customer's generation equipment. The customer pays for this charge every month; it will be the same every month unless the contract standby kW is revised. The rate for the reservation charge is based on a fraction of the Company's demand cost, as discussed below and illustrated in Attachment B.

Daily Demand Charge
\$/Daily Demand (max kW per day)

The billing of the Daily Demand Charge is based on the maximum Backup Demand each 24-hour day. Backup Demand during a 15 minute interval is the lesser of the Contract Standby kW minus the customer's load served by the customer's generation equipment, but not less than zero, or the load served by the Company's generation equipment in that same time interval as the customer's own generation load. The standby service customer only pays for the standby service required each day. The total billed daily demand charges are the sum of each daily demand charge during the billing month. The rate for the daily demand charge is based on a fraction of the Company's demand cost, as discussed below and illustrated in Attachment B.

The Daily Demand Charge will be waived during days of Schedule Maintenance (described below).

The supply voltage adjustment in the applicable regular commercial rate schedule shall apply to the Reservation Demand Charge and the Daily Demand Charge.

Standby Energy Charge

The standby service customer that uses standby service kWh from the Companies shall pay a standby energy charge per kWh. The Standby Energy kWh is the sum of the 15 minute interval Backup Demands (including periods of Scheduled Maintenance) during the billing month divided by four. The rate for the Standby Energy Charge is based on a fraction of the Company's demand cost and the full amount of the Company's energy cost, as discussed below and illustrated in Attachment B.

The supply voltage adjustment in the applicable regular commercial rate schedule shall apply to the Standby Energy Charge.



The Honorable Chairman and Members of
the Hawaii Public Utilities Commission
August 28, 2006
Page 4

Supplemental Service

The supplemental billing demand kW shall be calculated as described in the applicable regular commercial rate schedule, based on the meter readings of the service provided by the Company's generation equipment, except that the calculated billing kW shall be reduced by the sum of the Standby billing kW for each day of the billing period divided by the total number of days in the billing period. A sample calculation of this adjusted billing kW is shown in the billing illustrations in Attachment C.

Supplemental service energy is billed under the applicable regular commercial rate schedule. Supplemental service energy kWh shall be based on the meter readings of the service provided by the Company's generation equipment less the Standby Energy kWh. A sample calculation of energy charges under supplemental service is shown in the billing illustrations in Attachment C.

The minimum charge under supplemental service shall be based the maximum kW provided by the Company's generation equipment in the current or 11 previous billing months, less the Contract Standby kW. If the installed capacity of the customer's non-utility power source exceeds the customer's total kW requirement, as determined by the Company, the monthly minimum charge shall be the sum of the Customer Charge under the applicable regular commercial rate schedule and the Standby Demand Charge.

All other elements of the applicable regular rate schedule apply to supplemental service, including the Customer Charge, the Power Factor Adjustment, the Supply Voltage Adjustment, and all other bill adjustments, including, but not limited to the Energy Cost Adjustment, the Commercial and Industrial DSM Adjustment, the Firm Capacity Surcharge and Adjustment, the IRP Cost Recovery Adjustment, the Temporary Rate Adjustment, and the Interim Rate Increase.

3. Terms and Conditions

Applicability

The proposed standby service tariff shall apply when a customer regularly obtains power service from a source(s) other than the Company, and obtains supplemental service from the Company when its non-utility power source(s) capability is less than its total power requirements. The proposed tariff shall not apply a) to non-utility power sources used exclusively by a customer for emergency service; or b) to non-utility power sources that would be used exclusively by a customer for emergency service but for an agreement between the customer and the Company to use the non-utility power sources to reduce utility system load and/or provide capacity to the utility system; or c) to non-utility power sources that are at least fifty

The Honorable Chairman and Members of
the Hawaii Public Utilities Commission
August 28, 2006
Page 5

percent fueled by non fossil fuel energy, calculated on an annual fuel energy input basis; or d) to non-utility power sources that produce electricity for sale to the Company under a purchased power agreement that is approved by the Commission, unless otherwise specified in the purchase power agreement; or e) to non-utility power sources that are operated for the benefit of customers who have an interruptible service contract (Rider I) or curtailable service contract (Rider M, option B) with the utility; or f) to non-utility power sources covered under an agreement for net energy metering with the Company under Rule No. 18.

Interconnection

The customer's non-utility power source(s) can be connected and operated in parallel with the utility system when the customer is served under the standby service tariff and operates in accordance with the terms of a contract for parallel interconnection under the Company's Rule No. 14. The Companies have provided proposed revisions to Rule No. 14 in accordance with D&O 22248 in this docket.

Metering

The customer's non-utility power source(s) shall be metered with a meter or recorder capable of interval metering unless the Company deems such metering to be impractical for engineering or operating reasons. If the customer's non-utility power source(s) cannot be metered by the Company, then the customer's Standby Billing kW per day shall be equal to the Contract Standby kW, and the customer shall not be eligible for Scheduled Maintenance Service.

Scheduled Maintenance Service

The customer may elect either Standard Scheduled Maintenance Service or Off-peak Scheduled Maintenance Service, or both, to define his Scheduled Maintenance Periods. Under Standard Scheduled Maintenance Service, the customer specifies up to two periods of scheduled maintenance per calendar year. Under Off-peak Scheduled Maintenance Service, the customer can schedule maintenance during off-peak hours (9 p.m. to 7 a.m., daily) with two weeks prior notice. The total of the scheduled maintenance periods under both Standard Scheduled Maintenance and Off-peak Scheduled Maintenance shall not exceed 3 weeks per non-utility power source.

4. Derivation of Standby Rates

The proposed standby rates are based on the most recent filed cost of service study for each of the Company's service areas, using the filed generation, transmission, and distribution costs. The generation costs are allocated to the proposed reservation charge rate based on the



The Honorable Chairman and Members of
the Hawaii Public Utilities Commission
August 28, 2006
Page 6

estimated reserve margin percentage required. The transmission and distribution costs are allocated to the proposed reservation charge based on the same percentages stipulated in HELCO's proposal for Rider A. The demand cost dollars, i.e., the generation and transmission demand costs that were not allocated to the reservation charge become the basis for the daily demand charge and the standby energy charge. Of those remaining generation and transmission demand costs, 90 percent are assigned to the daily demand charge, and are unitized by dividing by the estimated non-coincident peak demand in the cost of service study and dividing by 30.5 days. The remaining 10 percent of remaining generation and transmission demand costs are added to the production energy costs from the cost of service study, and are unitized by the estimated test year sales to derive the proposed standby energy charge. The Reservation demand charges, daily demand charges, and standby energy charges are estimated separately for Schedule J and Schedule P rate schedules. See Attachment B for the calculated derivations.

5. Sample Bill Calculations

Sample bill calculations under Schedule J and Schedule P for each Company service area are presented in Attachment C. The bill comparisons include a) an estimate of the customer's bill before the customer's non-utility power source(s) were installed, b) an estimate of the customer's bill where the customer secures energy from its non-utility power source and takes supplemental power from the utility, but there is no standby charge in place and c) the same scenario as (b) except the proposed Standby Service tariff applies. In addition for HELCO, an estimate of the customer's bill under the proposed Rider A rates is made. A comparison is made of the customer's contribution to fixed costs under each billing scenario.

Compliance with Decision and Order No. 22248

As described above, the derivation of the reservation charge is based on the unbundled cost of service elements: generation demand costs, transmission demand costs, and distribution demand costs (the costs for ancillary services are not separately identified in the utility cost-of-service study, but are instead included within the generation, transmission, and distribution costs). Both standby services and supplemental services are based on the same generation, transmission, and distribution costs in the utility cost of service; the same assets provide the both electric power services.

The utilities propose that the cost of service studies used to develop the proposed standby rates be based on the most recent filed cost of service study for that utility. That allows the level of standby charges to be consistent with the level of supplemental service charges, especially because both services are provided by the same generation, transmission, and distribution assets. In addition, in order to balance expected revenues with the revenue requirements of the system, the utilities propose that standby charges be modified only in general rates cases, in the same



The Honorable Chairman and Members of
the Hawaii Public Utilities Commission
August 28, 2006
Page 7

manner and at the same time that supplemental service (regular commercial rate schedule) charges are modified.

Summary

HECO/HELCO/MECO maintain that the attached proposed standby rate tariffs are reasonable, and request that the Commission issue an order approving the proposed modifications.³

Sincerely,



Attachments

cc: Division of Consumer Advocacy
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³ HECO/HELCO/MECO respectfully request that the Commission issue its order at least five business days prior to the effective date of the proposed Standby Rate tariffs to allow the Companies time to prepare the tariff sheets.



ATTACHMENT A
PAGE 12

Superseding Revised Sheet No. 50A
Effective April 1, 2006

REVISED SHEET NO. 50A
Effective

RATE SCHEDULES

<u>Sheet</u>	<u>Schedule</u>	<u>Effective Date</u>	<u>Character of Service</u>
61	Rider I	March 15, 1991	Interruptible Contract Rider
62	Rider T	February 21, 1995	Time-of-Day Rider
62A	Rider T	February 21, 1995	Time-of-Day Rider
63	Energy Cost Adjustment Clause	February 15, 2001	All Schedules Except Schedule Q
63A	Energy Cost Adjustment Clause	February 15, 2001	All Schedules Except Schedule Q
64	IRP Cost Recovery Provision	April 1, 2006	All Schedules Except Schedule Q
65	IRP Cost Recovery Provision	April 1, 2006	All Schedules Except Schedule Q

(PAGES 66 - 74 NOT ASSIGNED)

75	Schedule SS	Standby Service
75A	Schedule SS	Standby Service
75B	Schedule SS	Standby Service
75C	Schedule SS	Standby Service
75D	Schedule SS	Standby Service
75E	Schedule SS	Standby Service
75F	Schedule SS	Standby Service
75G	Schedule SS	Standby Service
75H	Schedule SS	Standby Service

(PAGES 76 - 80 NOT ASSIGNED)

HAWAII ELECTRIC LIGHT COMPANY, INC.

ATTACHMENT A
PAGE 13

SHEET NO. 75
Effective

SCHEDULE SS
STANDBY SERVICE

APPLICABILITY:

Applicable to standby service to customers with alternate regular source(s) of energy other than electricity from the Company (non-utility power source(s)). Service under this Schedule shall be at least 25 kW, supplied and metered at a single voltage and delivery point as specified by the Company.

Standby service is the power service that the Company is obligated to stand ready to supply when the customer's non-utility power source(s) is unavailable for service. Standby service refers to power service that the Company provides during both unscheduled outages (Backup Service) and Scheduled Maintenance Periods.

Supplemental Service is the power service supplied by the Company in addition to the customer's electric power requirements normally obtained from its non-utility power source(s). The Company will serve the customer's supplemental service under the applicable regular commercial rate schedule.

Rates:

The rates, terms, and conditions of the applicable regular commercial rate schedule shall apply except that the Billing kW under the applicable commercial rate schedule shall be adjusted as described below, the Standby Demand Charge and Standby Energy Charge shall be added to the customer's bill, and the Minimum Charge provisions of this Schedule shall supersede the Minimum Charge provisions in the applicable regular commercial rate schedule.

Standby Demand Charge:

The Standby Demand Charge for each month shall be the sum of the Reservation Demand Charge and the Daily Demand Charge.

HAWAII ELECTRIC LIGHT COMPANY, INC.

ATTACHMENT A
PAGE 14

SHEET NO. 75A
Effective

SCHEDULE SS - Continued

Standby Demand Charge: continued

Reservation Demand Charge:

\$13.86 per Contract Standby kW, for customers served on
Schedule J for Supplemental Service.

\$14.62 per Contract Standby kW, for customers served on
Schedule P for Supplemental Service.

The Contract Standby kW shall be the greater of (1) the Contract Standby kW specified in the customer's Standby Service Contract form or (2) the maximum load served by the Customer's generation equipment in the current or previous 11 billing months, less the kW amount specified in the customer's Standby Service Contract form that would not have to be served by the Company in the event of an outage of the customer's generation equipment. The Contract Standby kW shall also include, in addition to the customer's normal operating level of its generation equipment, an equivalent kW for electrical power that would be required to replace thermal energy that is not supplied by the customer's generation equipment.

Daily Demand Charge:

\$0.73 per Standby Billing kW per day, for customers
served on Schedule J for Supplemental Service.

\$0.88 per Standby Billing kW per day, for customers
served on Schedule P for Supplemental Service.

Backup Demand during a 15 minute interval is the lesser of (1) the Contract Standby kW minus the customer's load served by the customer's generation equipment, but not less than zero, or (2) the load served by the Company's generation equipment in that same time interval as the customer's own generation load. The Standby Billing kW each day is the maximum Backup Demand during the 24-hour day. The daily demand charge shall be the sum of the calculated demand charges for each day of the billing period. For the purpose of calculating the Backup Demand only, the Contract Standby kW will exclude any amounts that represent equivalent kW for electrical power that would be required to replace thermal energy that is not supplied by the customer's generation equipment.

The Daily Demand Charge will be waived during days of Scheduled Maintenance.

HAWAII ELECTRIC LIGHT COMPANY, INC.

ATTACHMENT A
PAGE 15

SHEET NO. 75B
Effective

SCHEDULE SS - Continued

Standby Energy Charge:

Standby Energy kWh is the sum of the 15 minute interval Backup Demands (including periods of Scheduled Maintenance) during the month divided by four.

Standby Energy Charge:

\$0.180 per Standby Energy kWh, for customers served on Schedule J for Supplemental Service.

\$0.175 per Standby Energy kWh, for customers served on Schedule P for Supplemental Service.

Supplemental Service Demand Charge:

The Billing kW for Supplemental Service shall be as follows:

The Billing kW shall be calculated as described in the applicable regular commercial rate schedule, based on the meter readings of the service provided by the Company's generation equipment, except that the calculated billing kW shall be reduced by the sum of the Standby billing kW for each day of the billing period divided by the total number of days in the billing period. This adjusted Billing kW shall be the kW basis for billing the supplemental service demand and energy charges.

Supplemental Service Energy Charge:

Supplemental Service Energy kWh shall be based on the meter readings of the service provided by the Company's generation equipment and shall be the total kWh provided minus the Standby Energy kWh. Supplemental Service Energy shall be billed at the rates shown on the appropriate regular commercial rate schedule, based on the adjusted billing kW described above.

Supply Voltage Adjustment:

The Supply Voltage Adjustment in the applicable regular commercial rate schedule shall apply to the Standby Demand Charge and the Standby Energy Charge.

HAWAII ELECTRIC LIGHT COMPANY, INC.

ATTACHMENT A
PAGE 16

SHEET NO. 75C
Effective

SCHEDULE SS - Continued

MINIMUM CHARGE:

The monthly minimum charge shall be the sum of the Minimum Charge under the applicable regular commercial rate schedule and the Standby Demand Charge. The Minimum Charge under the applicable regular commercial rate schedule shall be based on the maximum kW provided by the Company's generation equipment in the current or 11 previous billing months less the Contract Standby kW. Where the Company determines that the installed capacity of the customer's non-utility power source(s) exceeds the customer's total kW requirement as determined by the Company, the monthly minimum charge shall be the sum of the Customer Charge under the applicable regular commercial rate schedule and the Standby Demand Charge.

TERMS AND CONDITIONS:

1. This tariff shall apply when a customer regularly obtains power service from a source(s) other than the Company, and obtains supplemental service from the Company when its non-utility power source(s) capability is less than its total power requirements; and/or requires standby service from the Company.
2. This tariff shall not apply
 - a) to non-utility power sources used exclusively by a customer for emergency service; or
 - b) to non-utility power sources that would be used exclusively by a customer for emergency service but for an agreement between the customer and the Company to use the non-utility power sources to reduce utility system load and/or provide capacity to the utility system; or
 - c) to non-utility power sources that are at least fifty percent fueled by non fossil fuel energy, calculated on an annual fuel energy input basis; or
 - d) to non-utility power sources that produce electricity for sale to the Company under a purchased power agreement that is approved by the Commission, unless otherwise specified in the purchase power agreement; or
 - e) to non-utility power sources that are operated for the benefit of customers who have an interruptible service contract (Rider I) or curtailable service contract (Rider M, option B) with the utility; or
 - f) to non-utility power sources covered under an agreement for net energy metering with the Company under Rule No. 18.

HAWAII ELECTRIC LIGHT COMPANY, INC.

ATTACHMENT A
PAGE 17

SHEET NO. 75D
Effective

SCHEDULE SS - Continued

TERMS AND CONDITIONS - Continued

3. The connection and operation of the customer's non-utility power source(s) in parallel with the Company's system will be permitted when the customer is served under this Schedule and in accordance with the terms of a contract with the Company for parallel interconnection, as described in the Company's Rule No. 14.
4. Customers receiving service under this Schedule shall sign a Standby Service Contract with the Company, which shall specify the Contract Standby kW for standby service required from the Company, and the Scheduled Maintenance Service, if any, elected by the customer.
5. The Contract Standby kW normally will not be less than the lesser of (1) the Total Capacity of the customer's non-utility power source(s), or (2) the highest customer kW Load for the twelve months preceding commencement of service under this Schedule, or execution date of the Standby Service Contract, whichever is earlier. The customer must notify the Company of any changes in its non-utility power source(s) that may affect its Contract Standby kW specified in the Standby Service Contract. The Company may, from time to time, verify the customer's Contract Standby kW specified in the Standby Service Contract. Where the Company determines that the Contract Standby kW requires adjustment, the Company shall inform the customer in writing 60 days before such change becomes effective.
6. The maximum instantaneous demand may be limited by contract. When the capacity of the service connection is limited to conform to the Contract Standby kW, the customer shall provide, install and maintain at its expense, and the Company shall control, any circuit breaker and other equipment necessary to limit the service connection to the Contract Standby kW.
7. The Company shall not be liable for any consequential damages caused by, or resulting from any limitation of kW capacity supplied to the customer under this Schedule.

HAWAII ELECTRIC LIGHT COMPANY, INC.

ATTACHMENT A
PAGE 18

SHEET NO. 75E
Effective

SCHEDULE SS - Continued

TERMS AND CONDITIONS - Continued

8. Scheduled Maintenance Service under this rate schedule shall be for power service during the Scheduled Maintenance Periods of the customer's non-utility power source(s). A customer shall specify in the Standby Service Contract whether it is taking Standard Scheduled Maintenance Service, Off-peak Scheduled Maintenance Service, or both.

For Standard Scheduled Maintenance Service, maintenance for a customer's non-utility power source is subject to the following terms and conditions:

- a. A non-utility power source cannot be down for Standard Scheduled Maintenance Service more than 2 times during the calendar year.
- b. The customer shall specify its initial Scheduled Maintenance Periods (to be taken during the first calendar year or partial calendar year in which it takes Scheduled Maintenance Service), subject to review and approval by the Company, in the Standby Service Contract. Prior to July 1 of each year, the customer shall submit in writing to the Company any changes to the Scheduled Maintenance Periods for the following calendar year. Where the Company indicates within 60 days that any such changes are not acceptable to the Company based on operating, technical or other similar reasons, the Company and the customer will work together to determine the changes to the Scheduled Maintenance Periods that are reasonable and acceptable to both parties.
- c. Either the Company or the customer may request one change in the start date and/or duration of any scheduled outage by written request (specifying the reason for such request, and the proposed start date and/or duration of the scheduled outage) made at least thirty days before the scheduled start of such outage. The Company and the customer will make reasonable efforts to accommodate such requests (by written responses given within one week of receiving such requests).

HAWAII ELECTRIC LIGHT COMPANY, INC.

ATTACHMENT A
PAGE 19

SHEET NO. 75F
Effective

SCHEDULE SS - Continued

TERMS AND CONDITIONS - Continued

For Off-peak Scheduled Maintenance Service, a customer may elect Scheduled Maintenance Periods that occur only during the Company's off-peak period, subject to the following conditions:

- a. A power source can be maintained during off-peak hours only with two-week prior notice to the Company. Notice can be given either by phone, fax, or e-mail, and must include the meter number for the power source(s) to be maintained and the expected additional kW demand to be provided by the Company during the Scheduled Maintenance Service period(s). Off-peak hours are 9 p.m. - 7 a.m., daily.
- b. Maintenance on the same power source can be scheduled no more than twice within a four-week period. The customer must call the Company in advance of shutting off and/or starting up its power source that will be maintained under this provision.
- c. The Standby Service Contract must specify the non-utility power source(s) and meter numbers of the sources to be maintained during off-peak hours under the above terms.

The total of the Scheduled Maintenance Periods arranged under Standard Scheduled Maintenance Service and Off-peak Scheduled Maintenance Service shall not exceed 3 weeks per non-utility power source within a calendar year.

9. The customer's non-utility power source(s) shall be metered with a meter or recorder capable of interval metering, unless the Company deems such metering to be impractical for engineering or operating reasons. If the customer's non-utility power source(s) cannot be metered by the Company, then the customer's Standby Billing kW per day shall be equal to the Contract Standby kW, and the customer shall not be eligible for Scheduled Maintenance Service. If the customer has more than one non-utility power source, and elects scheduled maintenance service for only one of its non-utility power sources at a time, then each of the customer's non-utility power sources shall be separately metered.

HAWAII ELECTRIC LIGHT COMPANY, INC.

ATTACHMENT A
PAGE 20

SHEET NO. 75G
Effective

SCHEDULE SS - Continued

TERMS AND CONDITIONS - Continued

10. The Company shall install, own, operate, maintain, and read meters on the customer's non-utility power source(s) for billing purposes. The customer shall be responsible for any cost associated with metering its non-utility power source(s), including the total installed cost of the meters. All meters shall be installed at some convenient place approved by the Company upon the customer's premises, and shall be so placed as to be accessible at all times for inspection, reading, and testing.

When the Company performs maintenance work on the meters on the customer's non-utility power source(s), the Company shall bill the customer for the total cost associated with such maintenance including labor and material costs, and shall add this amount to the customer's electric bill for the period. The Company shall provide the customer with the breakdown of such maintenance costs such as the labor cost, materials and supplies, taxes, and any other cost incurred.

The customer shall, at its expense, furnish, install and maintain in accordance with the Company's requirements all associated equipment such as all conductors, service switches, fuses, meter sockets, meter and instrument transformer housing and mountings, switchboard meter test buses, meter panels, and similar devices, required for service connection and meter installations on customer's premises. The customer shall at its expense, provide a dedicated telephone line to connect the meter(s) to the Company's communication system.

11. The term of contract under this Schedule is at least one (1) year, and the contract shall remain in effect from month-to-month thereafter, unless terminated by either party upon thirty (30) days prior written notice to the other party. Early termination by the customer shall incur a fee equal to the sum of the last six months' Reservation Demand charges.
12. Service supplied under this Schedule shall be subject to the Rules and Regulations of the Company.

HAWAII ELECTRIC LIGHT COMPANY, INC.

ATTACHMENT A
PAGE 21

SHEET NO. 75H
Effective

Standby Service Contract Form

This Contract covers Standby Service provided by HAWAII ELECTRIC LIGHT COMPANY, INC. (HELCO) to:

Customer: _____ Account Number: _____
Service Address: _____

Under this Contract, the electric service provided by HELCO to the customer's service location shall be served on rate Schedule SS and Schedule _____. All terms of Schedule _____ shall apply, except as further specified in Schedule SS and in this Contract.

The customer elects the following Scheduled Maintenance Service:

_____ Standard Scheduled Maintenance Service
_____ Off-peak Scheduled Maintenance Service

Contract Standby kW _____ (1)

Installed kW Capacity of Each Non-Utility Power Source _____ (2)

Total Number of Non-Utility Power Sources _____ (3)

Standard Scheduled Maintenance Periods & Non-Utility Power Sources to be maintained: _____

This Contract shall become effective at the beginning of the first regular billing cycle following _____ (date) or the first billing period after the installation of the required meters for service under Schedule _____ and Schedule SS, whichever occurs later.

The parallel interconnection of the customer's non-utility power sources with the Company's system shall be permitted in accordance with the terms and conditions specified in a contract for parallel interconnection.

Term of Contract shall be at least one year, and shall continue thereafter month-to-month until terminated by either party upon thirty (30) days prior written notice to the other party. This Contract may be terminated at any time by mutual agreement of the Company and the customer.

Authorized Customer Signature:

HELCO Representative:

Name Date

Title

Name Date

Title

HAWAII ELECTRIC LIGHT COMPANY, INC.

Hawaii Electric Light Company, Inc.

Derivation of Standby Charge Rates

		Total Costs at Proposed Rates in \$000s		% of Cost Applied (c)	Sch J Standby Rate per kW (d = a x c)	Sch P Standby Rate per kW (e = b x c)
		Sch. J (a)	Sch. P (b)			
L1	Generation (80% of Tot. Gen. Demand Costs)	\$24,383.1	\$12,754.2	0%	\$0.0	\$0.0
L2	Reserve Capacity (20% of Tot. Gen. Demand Costs)	\$6,095.8	\$3,188.6	100%	\$6,095.8	\$3,188.6
L3	Transmission Demand	\$5,739.4	\$2,952.4	---	\$2,984.5	\$1,535.3
L4	Distribution Demand	\$8,108.1	\$2,252.2	100%	\$8,108.1	\$2,252.2
L5 = sum(L1-L4)	Total	<u>\$42,326.4</u>	<u>\$21,147.4</u>		<u>\$15,188.4</u>	<u>\$6,976.0</u>
L6	Non-Coincident Sales mW				1,096.2	477.3
L7	Energy Sales MWh				354,900	238,100
L8 = L5 - L6	Proposed Reservation Demand Charge per kW				\$13.86	\$14.62
L9	Demand Costs Not in Reservation Charge				\$27,138.0	\$14,171.4
L10 = L9 x 10%	Demand Costs in Backup Energy Charge				\$2,713.8	\$1,417.1
L11 = L9 - L10	Demand Costs in Daily Demand Charge				\$24,424.2	\$12,754.3
L12 = (L11+L6)/30.5	Proposed Daily Demand Charge per kW				\$0.73	\$0.88
L13	Energy Costs at Proposed Rates (in \$000s)				\$61,191.7	\$40,344.2
L14 = (L10+L13)/L7	Proposed Backup Energy Charge per kWh				\$0.180	\$0.175

* 60% of Transmission Demand Cost treated as Generation demand cost, and
40% of Transmission Demand Cost treated as Distribution demand cost

References:

L1-L4 (Columns A,B), L13: HELCO-WP-2001, Docket No. 05-0315, Page 6.
L3-L4 (Column C): Based on proportions used to derive Rider A charge in settlement agreement, Docket No. 99-0207.
L6-L7: HELCO-WP-2001, Docket No. 05-0315, Page 7.

HAWAII ELECTRIC LIGHT COMPANY, INC.
Standby Service Billing Examples @ Direct Testimony Proposed Rates

ATTACHMENT C
PAGE 5

CASE - SCHEDULE P

	A Schedule P No DG, No Standby Rate (billed as if all energy purchased from HELCO)	B Schedule P DG, No Standby Rate (bill only energy supplied by HELCO)	C Schedule P DG, Standby Rate (bill based on proposed Standby Rate Schedule)	D Schedule P DG, Rider A
Customer DG Capacity	0	700	700	700
Max kW, HELCO meter, current month	975	900	900	900
Max kW, HELCO meter, previous 11 months	1,040	910	910	910
Max kW, Customer total requirement, current month	975	975	975	975
Max kW, Customer total req, previous 11 months	1,040	1,040	1,040	1,040
kWh, HELCO meter	529,000	118,000	118,000	118,000
kWh, Customer generation	0	411,000	411,000	411,000
kWh, Customer total requirement	529,000	529,000	529,000	529,000
Standby Billing kW per day (total for the month)	0	7,300	7,300	7,300
Power Factor	97	97	97	97
Standby Energy kWh	0	34,000	34,000	34,000
Schedule P Billing kW	1,008	905	870	308
Schedule P Billing kWh	529,000	118,000	84,000	84,000
Contract Standby kW			700	700
Standby Billing kW @ Average Per Day			235	235
Load Factor, HELCO Meter	73%	18%	18%	18%
Load Factor, Customer Generator		79%	79%	79%
Bill Components				
Customer Charge	\$500.00	\$500.00	\$500.00	\$500.00
Demand Charge				
First 500 kW - \$19.50/kW	\$9,750.00	\$9,750.00	\$9,750.00	\$8,006.00
Above 500 kW - \$19.00/kW	\$9,852.00	\$7,695.00	\$3,230.00	\$0.00
Energy Charge				
First 200 kwh/kwb - 24.2453¢/kWh	\$48,878.52	\$28,608.45	\$20,368.05	\$14,935.10
Next 200 kwh/kwb - 22.0651¢/kWh	\$44,483.24	\$0.00	\$0.00	\$4,842.58
Over 400 kwh/kwb - 21.0620¢/kWh	\$28,496.00	\$0.00	\$0.00	\$0.00
Power Factor Adj	-\$2,506.88	-\$828.98	-\$800.23	-\$485.91
Reservation Charge				
at \$14.62 / kw			\$10,234.00	
Standby Charge at \$13.10 / kW				\$9,170.00
Daily Demand Charge				
at \$0.88/kW/day			\$6,424.00	
Scheduled Maintenance Energy at 16.1 cents / kWh				\$5,474.00
Standby Energy Charge			\$5,950.00	
at 17.5 ¢/kWh				
Total Month's Base Bill	\$137,253.09	\$49,725.47	\$55,853.82	\$40,581.78
Contribution to Fixed Costs				
at 17.2 cents/kWh energy cost	\$48,265.09	\$25,429.47	\$35,557.82	\$20,285.78
Unrecovered Contribution				
to Fixed Costs		\$20,835.61	\$10,707.28	\$25,996.31

HAWAII ELECTRIC LIGHT COMPANY, INC.
Standby Service Billing Examples @ Direct Testimony Proposed Rates

ATTACHMENT C
PAGE 8

CASE - SCHEDULE J

	A Schedule J No DG, No Standby Rate (billed as if all energy purchased from HELCO)	B Schedule J DG, No Standby Rate (bill only energy supplied by HELCO)	C Schedule J DG, Standby Rate (bill based on proposed Standby Rate Schedule)	D Schedule J DG, Rider A
Customer DG Capacity	0	40	40	40
Max kW, HELCO meter, current month	115	80	80	80
Max kW, HELCO meter, previous 11 months	120	90	90	90
Max kW, Customer total requirement, current month	115	115	115	115
Max kW, Customer total req. previous 11 months	120	120	120	120
kWh, HELCO meter	34,500	10,500	10,500	10,500
kWh, Customer generation	0	24,000	24,000	24,000
kWh, Customer total requirement	34,500	34,500	34,500	34,500
Standby Billing kW per day (total for the month)	0	450	450	450
Power Factor	95	95	95	95
Standby Energy kWh	0	0	3,000	0
Schedule J Billing kW	115	85	70	78
Schedule J Billing kWh	34,500	10,500	7,500	10,500
Contract Standby kW			40	40
Standby Billing kW @ Average Per Day			15	15
Load Factor, HELCO Meter	40%	18%	18%	18%
Load Factor, Customer Generator		81%	81%	81%
Bill Components				
Customer Charge	\$65.00	\$65.00	\$65.00	\$65.00
Demand Charge				
At kW -\$12.00/kW	\$1,416.00	\$1,020.00	\$840.00	\$936.00
Energy Charge				
First 200 kWh/kwb - 26.4456¢/kWh	\$6,241.16	\$2,778.79	\$1,983.42	\$2,778.79
Next 200 kWh/kwb - 24.2283¢/kWh	\$2,640.88	\$0.00	\$0.00	\$0.00
Over 400 kWh/kwb - 23.2274¢/kWh	\$0.00	\$0.00	\$0.00	\$0.00
Power Factor Adj	-\$102.98	-\$37.97	-\$28.23	-\$37.13
Reservation Charge				
at \$13.86 / kw			\$554.40	
Standby Charge at \$12.10/kW				\$484.00
Daily Demand Charge				
at \$0.73/kW/day			\$328.50	
Scheduled Maintenance Energy at 16.0 cents/kWh				\$0.00
Standby Energy Charge			\$540.00	
at 16.0 ¢/kWh				
Total Month's Base Bill	\$10,260.07	\$3,823.82	\$4,283.09	\$4,224.66
Contribution to Fixed Costs				
at 17.2 cents/kWh energy cost	\$4,326.07	\$2,017.82	\$2,477.09	\$2,418.66
Unrecovered Contribution				
to Fixed Costs		\$2,308.25	\$1,848.98	\$1,907.41

CA-IR-306

Ref: T-20, pages 24 and 29, Availability Clauses for Schedules J and P.

Please provide the following information with respect to the 200 kW qualification rule being proposed to distinguish customers between Schedules J and P:

- a. Explain why existing customers are proposed to be grandfathered,
- b. Explain the procedures and schedule through which HELCO intends to evaluate customer impacts from rate migration and inform each customer of the optimal rate to be used.
- c. State what assumptions were made regarding potential migration impacts and whether Schedules J and P migrations have been quantified or included in the Company's test year revenue calculations.
- d. Provide calculations of the revenue effect of any pro-forma migrations that were assumed.

HELCO Response:

- a. Existing Schedule P customers with loads less than 200 kW and existing Schedule J customers with loads greater than or equal to 200 kW are proposed to be grandfathered on their respective existing rate schedules because these customers have always had, up to this point, a choice of Schedule J or Schedule P service. Grandfathering these customers is a consideration extended to these customers in this transition; HELCO has made a similar proposal in its test year 2005 rate case, Docket No. 04-0113.
- b. First, HELCO must have its proposal to modify Schedule J and Schedule P approved. Assuming the Schedule J and Schedule P rates are approved as proposed, HELCO would identify Schedule P customers with loads less than 200 kW and Schedule J customers with loads greater than or equal to 200 kW, at that time, for possible grandfathering. These are the only customers that can potentially migrate from one rate schedule to another. HELCO would perform a Schedule P vs. Schedule J billing analysis for these customers to see which rate schedule produces a lower electric bill. The results of these analyses would be communicated to HELCO's commercial account managers for discussion and review with the customers. The final decision to remain on the existing schedule or to change is made

by the customer.

- c. There were no migrations assumed from either Schedule J or Schedule P. Therefore there are no impacts to quantify and include in the Company's test year revenue calculations.
- d. There were no pro-forma rate migrations assumed so there is no estimated revenue effect of rate migrations.

CA-IR-307

Ref: T-20, page 10, Distribution Facilities – Customer Component.

According to Mr. Young's testimony, "The distribution lines and transformers are assigned to demand and customer components, since the size and costs of these facilities are dependent not only on the customers' load, but also on the type and location of the customers." Please provide complete copies of HELCO distribution engineering manuals, instructions, guidelines and all other documents that are used to define how HELCO distribution facilities are sized and designed to meet the types, locations and anticipated load levels of customers under alternative circumstances.

HELCO Response:

The requested documents include the following:

National Electric Code (NEC)
National Electric Safety Code (NESC)
General Order 6
General Order 7
General Order 10
HECO Overhead Engineering Standards
HECO Underground Engineering Standards
Customer Engineering (C.E.) Planners Guide
HECO Engineering Standard Practice Manual
Joint Pole Agreement
HECO Electric Pole Installation Manual (ESIM)
HECO Pole Loading Calculation Excel spreadsheet
HELCO Meter Standard
Lineman and Cableman Handbook

The requested information is voluminous and is available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the requested information.

CA-IR-308

Ref: HELCO WP-2001, pages 85-97, Minimum System Poles.

Please provide the following information regarding the 25 foot minimum system distribution pole:

- a. Confirm that a 25 foot distribution pole was used by HELCO to determine its 38% customer component weighting for the distribution poles account.
- b. If anything other than an unqualified confirmation is provided in response to part (a) of this information request, please explain the response and illustrate how the minimum pole size was determined and converted into the customer component weighting value.
- c. Explain why no 25 foot poles appear to have been installed by HELCO since 1979.
- d. Explain why only 20 poles that are 25 feet in length exist throughout the HELCO distribution system, if this is the commonly installed minimum size facility.
- e. Provide a complete statement of HELCO's policy with regard to distribution pole placement and sizing, under representative frequently encountered typical conditions of pole initial installation or replacement.
- f. Has HELCO installed any poles shorter than 25 feet?
- g. If the response to part (f) of this information request is affirmative, please provide the dates and numbers of such pole installations.
- h. What approximate percentage of pole installations in a representative year are replacements of existing poles, rather than new pole line construction?

HELCO Response:

- a. Yes.
- b. Not applicable.
- c. In 1979, per a joint pole meeting between HELCO, the County of Hawaii, and the telephone company, it was agreed that a minimum 30 ft. pole would be installed in order to provide minimum ground clearances per General Order (G.O.) 6.
- d. See the response to subpart c. above.
- e. See HELCO's response to CA-IR-307.
- f. No.
- g. Not applicable.
- h. We are unable to provide an answer. The plant accounting system does track pole

installations, but does not distinguish between new pole placements and replacement of existing poles.

CA-IR-309

Ref: HELCO WP-2001, pages 98-103, Minimum System Overhead Primary Conductor.

Please provide the following information regarding the 1/0_AAC minimum system overhead primary conductor:

- a. Confirm that a 1/0 AAC conductor was used by HELCO to determine its 65% customer component weighting for the primary voltage overhead conductors account.
- b. If anything other than an unqualified confirmation is provided in response to part (a) of this information request, please explain the response and identify how the minimum OH primary conductor size was determined and converted into the customer component weighting value.
- c. Provide a complete statement of HELCO's policy with regard to distribution overhead primary conductor placement and sizing, under representative frequently encountered typical conditions of overhead pole line initial installation or replacement.
- d. State whether HELCO has any installed overhead primary conductor smaller than 1/0 AAC 245 amp capacity and provide the footage, cost and installation year details for all such smaller conductor (if any).
- e. Approximately how many individual residential customers within single family detached homes, using average test year demand levels of single phase service, could be served by a single 1/0_AAC primary overhead conductor?
- f. Approximately how many individual residential customers within separately metered apartments, using average test year demand levels of single phase service, could be served by a single 1/0_AAC primary overhead conductor?
- g. For what reasons does HELCO only rarely install small quantities of 4/0_BC (480 amp) and 556.5_KCM (715 amp) overhead primary conductor, as evidenced by many years with no installations of these materials on pages 101 and 103, respectively?

HELCO Response:

- a. Yes.
- b. Not applicable.
- c. See HELCO's response to CA-IR-307.
- d. HELCO's current practice is to install primary overhead conductors 1/0 AAC aluminum or higher. However, HELCO has existing copper primary overhead conductors that are smaller which are mainly found on the older lower voltage distribution systems of 2,400 volts and 4,160 volts. The copper primary conductors are \$0.4962 per foot for No. 2 bare copper and \$0.4626 per foot for No. 4 bare copper as compared to \$0.2485 per foot for 1/0 AAC

aluminum conductor. The distance and installation years of these older copper conductors are unknown.

- e. The 1/O AAC primary conductor on the 7,200 volt distribution system will serve approximately 360 single family residences, assuming 4.4KW average test year demand per single phase service. Other factors which may reduce the number of single family residences are on longer distribution lines that may limit the number of customers due to excessive voltage drop. Lower voltage single phase primary distribution systems such as the 2,400 volt system will serve fewer customers.
- f. The response is the same as in subpart e. above, assuming 4.4KW average test year demand per single phase service.
- g. HELCO installed low quantities of 4/O BC (bare copper) and 556.5 KCM AAC (Aluminum) because they are non-standard conductors having a higher cost than the standard conductors. When serving larger loads or longer lines it may be feasible to install these non-standard conductors on the distribution system.

CA-IR-310

Ref: HELCO WP-2001, pages 104-113, Minimum System Overhead Secondary Conductor.

Please provide the following information regarding the 4/3_AL_TPX minimum system overhead secondary conductor:

- a. Confirm that a 4/3_AL_TPX conductor was used by HELCO to determine its 89% customer component weighting for the secondary voltage overhead conductors account.
- b. If anything other than an unqualified confirmation is provided in response to part (a) of this information request, please explain the response and identify how the minimum secondary OH conductor size was determined and converted into the customer component weighting value.
- c. Provide a complete statement of HELCO's policy with regard to distribution overhead secondary conductor placement and sizing, under representative frequently encountered typical conditions of overhead pole line initial installation or replacement.
- d. State whether HELCO has any installed overhead secondary conductor smaller than 4/3_AL_TPX 100 amp capacity and provide the footage, cost and installation year details for all such smaller conductor (if any).
- e. Approximately how many individual residential customers within single family detached homes, using average test year demand levels of single phase service, could be served by a single 4/3_AL_TPX 100 amp secondary overhead conductor?
- f. Approximately how many individual residential customers within separately metered apartments, using average test year demand levels of single phase service, could be served by a single 4/3_AL_TPX 100 amp overhead conductor?
- g. For what reasons did HELCO cease installing the 4/3_AL_TPX 100 amp conductor after 1996, as indicated on page 105?
- h. When the 4/3_AL_TPX 100 amp was no longer installed after 1996, what alternative material(s) became the smallest commonly installed minimum sized overhead secondary conductor?
- i. Please explain why no installations are shown after 1994 of the 1/0_AER_TPX materials on page 107 and after 1995 for the 1/0_HUDSON 220 amp materials on page 109?

HELCO Response:

- a. Yes.
- b. Not applicable.
- c. See HELCO's response to CA-IR-307.
- d. No, HELCO has not installed lower current rated conductors below the 4/3_AL_TPX current rating. Currently, the 4/3_AL_TPX is our standard installation for residential

overhead secondary. HELCO may have installed smaller diameter conductors such as the No. 6 copper conductors, in an open wire configuration however, the current rating is equivalent to the 4/3_AL_TPX rating. HELCO is unaware of any secondary service installations below the No. 6 copper conductors.

- e. Based on current rating of the conductor approximately 5 customers may be served from the 4/3_AL_TPX secondary overhead conductor assuming 4.4KW average test year demand per single phase service. However, other factors such as longer service conductor lengths will reduce the number of customers because the voltage drop limitation may be reached before the over current rating limitation.
- f. The response is the same as in subpart e. above, assuming 4.4KW average test year demand per single phase service.
- g. The 4/3_AL_TPX 100 amp conductor is still in use. The installation quantities and costs of the 4/3_AL_TPX 100 amp conductor were inadvertently included in HELCO-WP-2001, page 112, under the description 4/O_AL_TPX 320 AMP Overhead Secondary Conductor. The additional installed quantities and costs of the 4/3_AL_TPX 100 amp conductor are listed below:

<u>Year</u>	<u>Quantity (ft)</u>	<u>Installed Cost (\$)</u>
1997	8,386	\$49,219.29
1998	2,214	11,270.73
1999	7,773	150,515.70
2000	18,658	47,649.50
2001	6,865	16,350.72
2002	19,003	62,098.62
2003	11,845	38,226.64
2004	15,657	27,241.67

These quantities and costs need to be included in HELCO-WP-2001, page 105, and removed from HELCO-WP-2001, page 112.

- h. See the response to subpart g. above.
- i. The installation quantities and costs of the 1/O_AER_TPX conductor were inadvertently included in HELCO-WP-2001, page 110, under the description Other 220 AMP Overhead Secondary Conductor. The additional installed quantities and costs of the 1/O_AER_TPX conductor are listed below:

<u>Year</u>	<u>Quantity (ft)</u>	<u>Installed Cost (\$)</u>
1997	158,756	\$224,247.12
1998	31,168	130,345.88
1999	75,033	224,181.41
2000	64,126	320,796.19
2001	47,712	164,572.59
2002	46,438	151,659.64
2003	71,496	197,855.80
2004	86,275	252,564.09

These quantities and costs need to be included in HELCO-WP-2001, page 107, and removed from HELCO-WP-2001, page 110

HELCO discontinued use of the 1/O Hudson cable due to new HECO standard requiring a better insulation type (from Neoprene to Polyethylene) and the new cable is COND,SERV DROP TPX AL 1/O 600V Purpura. The installed quantities and costs of the COND,SERV DROP TPX AL 1/O 600V Purpura are :

<u>Year</u>	<u>Quantity (ft)</u>	<u>Installed Cost (\$)</u>
1997	16,397	\$ 92,587.53
1998	10,349	101,552.28
1999	10,235	486.16
2000	15,419	74,108.19
2001	8,447	24,572.88
2002	8,920	27,967.69
2003	10,021	31,007.11
2004	19,099	54,434.16

CA-IR-311

Ref: HELCO WP-2001, pages 114-119, Underground Conduit.

Please provide the following information regarding the 2 inch minimum system underground conduit:

- a. Confirm that a 2 inch conduit was used by HELCO to determine its 47% customer component weighting for the conduit account.
- b. If anything other than an unqualified confirmation is provided in response to part (a) of this information request, please explain the response and identify how the minimum conduit size was determined and converted into the customer component weighting value.
- c. Explain why much larger quantities of 2 inch conduit have been installed since 1999, than in most of the prior years shown on page 115.
- d. Provide a complete statement of HELCO's policy with regard to underground conduit placement and sizing, under representative frequently encountered typical conditions of pole initial installation or replacement.
- e. What is HELCO's undergrounding policy for distribution facilities?
- f. Have the calculations set forth in the minimum system workpapers for conduit reflected any customer/developer contributions or advances to offset the installed costs of underground facilities – why or why not?

HELCO Response:

- a. Yes.
- b. Not applicable.
- c. More subdivisions were energized during the years with larger installed quantities. Conduits are not installed by HELCO, but accepted as In-Kind Contributions.
- d. See HELCO's response to CA-IR-307.
- e. Distribution facilities are placed underground as required by County Ordinance, HELCO tariffs and customer request.
- f. No, they have not. The analysis here focuses only on the asset quantities and their installed costs; the financing cost and the source of financing do not enter into this analysis.

CA-IR-312

Ref: HELCO WP-2001, pages 120-125, Underground Primary Conductors.

Please provide the following information regarding the #2_XLPEICN minimum system underground primary conductor:

- a. Confirm that #2_XLPEICN underground conductor was used by HELCO to determine its 78% customer component weighting for the underground primary conductors account.
- b. If anything other than an unqualified confirmation is provided in response to part (a) of this information request, please explain the response and identify how the minimum underground primary conductor size was determined and converted into the customer component weighting value.
- c. Explain why no #2_XLPEICN conductor (or any other underground primary conductor) appears to have been installed by HELCO since 1996.
- d. Explain why the next larger #4/0_XLPEICN 210 amp underground conductor actually costs less per foot to install than HELCO's chosen minimum system size conductor.
- e. Provide a complete statement of HELCO's policy with regard to underground primary conductor placement and sizing, under representative frequently encountered typical conditions of pole initial installation or replacement.
- f. For what reasons did HELCO determine its minimum system result of 78% was more reliable for cost of service purposes than the calculated 9% Customer Component, Zero intercept method set forth at workpaper page 120?
- g. Approximately how many individual residential customers within single family detached homes, using average test year demand levels of single phase service, could be served by a single #4/0_XLPEICN 210 amp underground primary conductor?
- h. Approximately how many individual residential customers within separately metered apartments, using average test year demand levels of single phase service, could be served by a single #4/0_XLPEICN 210 amp underground conductor?

HELCO Response:

- a. Yes.
- b. Not applicable.
- c. The data for installations from 1997 onward was excluded inadvertently from these workpaper pages.

The following should be added to HELCO-WP-2001, page 121 :

The installed quantities and costs of the COND, XLPEICN #2 1/C AL 12 KV

Year	Qty (Ft.)	Cost (\$)
1997	13,555	267,459.77
1998	7,675	66,752.31
1999	31,193	166,016.64
2000	62,341	342,021.63
2001	64,948	419,068.04
2002	62,289	416,738.89
2003	77,077	520,654.70
2004	58,870	447,584.99

The following should be added to HELCO-WP-2001, page 122 :

The installed quantities and costs of the COND, XLP AL 4/0 3C 15KV 220 MILS

Year	Qty (Ft.)	Cost (\$)
2001	1,850	49,537.89

The following should be added to HELCO-WP-2001, page 125:

The installed quantities and costs of the COND, PEIJ 1000 KCMIL 3-1/C AL 15KV

Year	Qty (Ft.)	Cost (\$)
1997	926	53,676.48
1998	23,625	1,041,363.08
1999	0	0.00
2000	1,325	58,039.83
2001	1,960	79,782.02
2002	10,683	190,466.94
2003	0	0.00
2004	3,134	112,496.88

Other installed underground primary conductors not previously listed in HELCO-WP-2001 are :

The installed quantities and costs of the COND, XLPEICN 4/0 3-1C AL 12KV

Year	Qty (Ft.)	Cost (\$)
1997	29,497	624,660.72
1998	16,751	294,605.22
1999	7,331	120,659.50
2000	24,552	298,680.18
2001	21,110	280,483.41
2002	57,013	608,442.11
2003	40,743	417,504.09
2004	12,262	116,169.87

The installed quantities and costs of the COND, XLPEICN 500MCM 3-1/C AL 12KV

Year	Qty (Ft.)	Cost (\$)
1997	4,625	199,552.77
1998	0	0.00
1999	6,566	133,648.54
2000	1,144	45,903.62
2001	7,277	99,936.88
2002	42,381	643,911.50
2003	3,222	77,888.15
2004	3,542	52,540.83

The installed quantities and costs of the COND, XLP AL #2 3/C 15KV 220 MILS

Year	Qty (Ft.)	Cost (\$)
1997	0	0.00
1998	0	0.00
1999	0	0.00
2000	1,444	23,449.44
2001	130	2,884.25
2002	70	248.05
2003	0	0.00
2004	0	0.00

The installed quantities and costs of the COND, XLPEICN #2 AL 3-1/C 12KV .

Year	Qty (Ft.)	Cost (\$)
1997	4,711	151,133.34
1998	8,740	272,843.79
1999	7,362	271,508.27
2000	11,914	120,185.41
2001	2,950	48,094.03
2002	75,981	696,362.54
2003	22,051	288,914.95
2004	2,706	43,745.62

These elements of minimum system study will be revised in the cost of service study the next time HELCO's revenue requirements are revised, but not later than at rebuttal testimony.

- d. 4/0 is used for 3-phase service while #2 is used for 1-phase service. This means that the

linear ft. involved would be cheaper to replace the 4/0 3-phase wire than just #2 1-phase wire in a specific length of conduit.

- e. See HELCO's response to CA-IR-307.
- f. Overall, for all plant account categories, the minimum system results were much more reasonable than the zero intercept method results. Several of the zero intercept values are negative, which implies a negative customer-related cost for a hypothetical no-load situation, which is not reasonable. The analysis sought to apply a single method for consistency, and so the more reasonable minimum system results were selected for application in the analysis.
- g. Approximately 309 individual residential customers may be served by a single #4/O_XLPEICN underground primary conductor assuming 4.4KW average test year demand per customer and installation on the 7,200 volt distribution system. Lower voltage distribution systems will serve a reduced number of customers.
- h. The response is the same as in subpart g. above, assuming 4.4KW average test year demand per single phase service.

CA-IR-313

Ref: HELCO WP-2001, pages 126-132, Underground Secondary Conductors.

Please provide the following information regarding the #2_TPX minimum system underground secondary conductor:

- a. Confirm that #2_TPX underground conductor was used by HELCO to determine its 50% customer component weighting for the underground secondary conductors account.
- b. If anything other than an unqualified confirmation is provided in response to part (a) of this information request, please explain the response and identify how the minimum underground secondary conductor size was determined and converted into the customer component weighting value.
- c. Explain why no #2_TPX conductor appears to have been installed by HELCO since 1994 (workpaper page 127).
- d. Explain why the next larger #3/0_TPX 188 amp underground conductor has also not been installed since 1996 (workpaper page 128).
- e. Provide a complete statement of HELCO's policy with regard to underground secondary conductor placement and sizing, under representative frequently encountered typical conditions of pole initial installation or replacement.
- f. For what reasons did HELCO determine that its minimum system result of 50% was more reliable for cost of service purposes than the calculated negative 112% Customer Component, Zero intercept method set forth at workpaper page 126?
- g. Approximately how many individual residential customers within single family detached homes, using average test year demand levels of single phase service, could be served by a single #2_TPX 111 amp underground primary conductor?
- h. Approximately how many individual residential customers within separately metered apartments, using average test year demand levels of single phase service, could be served by a single #2_TPX 111 amp underground conductor?

HELCO Response:

- a. Yes.
- b. Not applicable.
- c. The data for installations from 1997 onward was excluded inadvertently from this workpaper page.

The following should be added to HELCO-WP-2001, page 127 :

The installed quantities and costs of the COND, AL TPX 2-1/C #2 1-2# 600V

Year	Qty (Ft.)	Cost (\$)
1997	300	5,629.46
1998	0	0.00
1999	215	1,214.46
2000	0	0.00
2001	140	423.85
2002	0	0.00
2003	0	0.00
2004	60	37.63

- d. The data for installations from 1997 onward was excluded inadvertently from this workpaper page.

The following should be added to HELCO-WP-2001, page 128 :

The installed quantities and costs of the COND, AL TPX 2-1/C 3/0 1-1/0 600V are listed below.

Year	Qty (Ft.)	Cost (\$)
1997	6	2,410.48
1998	12,444	167,986.98
1999	3,550	10,999.91
2000	2,360	22,622.00
2001	3,150	37,446.04
2002	4,020	22,110.32
2003	2,400	11,176.07
2004	657	5,112.82

- e. See HELCO's response to CA-IR-307.
- f. Overall, for all plant account categories, the minimum system results were much more reasonable than the zero intercept method results. Several of the zero intercept values are negative, including the value shown on the referenced HELCO-WP-2001, page 126, which implies a negative customer-related cost for a hypothetical no-load situation, which is not reasonable. The analysis sought to apply a single method for consistency, and so the more reasonable minimum system results were selected for application in the analysis.
- g. Based on cable rating, up to 5 residential customers may be served from the single #2_TPX

underground secondary cable; however, the actual number depends on the distance from the transformer and type of load served. It was assumed that the number of customers served is on the secondary system because the #2_TPX has a limitation of 600 volts and is used on the secondary underground services.

- h. Same response as to subpart g. above.

CA-IR-314

Ref: HELCO WP-2001, pages 133-169, Minimum System Transformers.

Please provide the following information regarding the 10 KVA minimum system overhead transformer:

- a. Confirm that a 10 KVA overhead transformer was used by HELCO to determine its 56% customer component weighting for the transformers account, by combining an analysis of overhead 1 phase transformers with separate analyses of 1-phase and 3-phase padmount transformers.
- b. If anything other than an unqualified confirmation is provided in response to part (a) of this information request, please explain the response and identify how the minimum transformer size was determined and converted into the customer component weighting value.
- c. Provide a complete statement of HELCO's policy with regard to distribution transformer placement and sizing, under representative frequently encountered typical conditions of pole initial installation or replacement.
- d. Approximately how many individual residential customers within single family detached homes, using average test year demand levels of single phase service, could be served by a single 10 KVA overhead transformer?
- e. Approximately how many individual residential customers within single family detached homes, using average test year demand levels of single phase service, could be served by a single 25 KVA padmount transformer?
- f. For what reasons did HELCO employ the weighted average minimum system results to isolate an estimated customer component of transformers costs, rather than the 134% overhead transformer zero intercept (page 134), the 111% 1-phase padmount (page 149) and/or the 72% 3-phase padmount (page 157) results that were calculated.

HELCO Response:

- a. Yes.
- b. Not applicable.
- c. See HELCO's response to CA-IR-307.
- d. A single 10 KVA transformer may serve approximately 2 customers based on the 4.4 KW average test year demand per customer, however, the actual number of customers may vary depending on the type of load and the maximum distance the transformer has to be located from the load. Some types of load that require a dedicated transformer are the ones with a large arc welder or large pump that will cause flicker problems for the other customer that

shares the same transformer.

- e. A single 25 KVA transformer may serve approximately 5 customers based on the 4.4 KW average test year demand per customer, however, the actual number of customers may vary depending on the type of load and the maximum distance the transformer has to be located from the load. Some types of load that require a dedicated transformer are the ones with a large arc welder or large pump that will cause flicker problems for the other customers that share the same transformer.
- f. HELCO wanted to estimate a single customer component percentage for the entire Account 368; in addition, HELCO wanted that customer component percentage to be representative of all transformers in the account, hence the use of the weighted average minimum system results.

CA-IR-315

Ref: T-20, page 13, Marginal Cost Study Utilization.

Please identify the specific cost study results (amounts) from the Company's marginal cost of service study, by page and line of HELCO-WP-2012, that were used "in the design of the proposed time-of-use rates" or for any other specific proposed rate design purpose.

HELCO Response:

The proposed rates are designed such that, the proposed energy charges on Schedules R, G, J, H, P, and F, the proposed energy charges on Schedule J and Schedule P as adjusted for the Rider T off-peak credit, and the proposed energy charges on Schedules TOU-R, TOU-G, TOU-J, and TOU-P all exceed the marginal off-peak energy costs shown in HELCO-WP-2012, page 2, column 3.

CA-IR-316

Ref: HELCO-WP-2012, page 3, Marginal Cost Study Variable O&M Expenses.

Regarding the "Variable O&M Expense (2006 cents/kWh)" of 2.22369," please provide the following information:

- a. Explain the process used to identify and quantify such costs.
- b. Identify the types of expenditures that are included in this amount.
- c. State which NARUC Accounts such costs are recorded in.
- d. Provide complete copies of all studies, reports, workpapers and other documents prepared by "HECO Generation Planning" per the "source" legend to determine this amount.
- e. State whether these amounts are representative of costs that vary directly with the production of marginal energy by HELCO generating units.
- f. If the response to part (d) of this information request is negative, please explain the reasons why the amount is added to the other costs on this workpaper in order to determine the total "estimated marginal energy costs" on line 7.

HELCO Response:

- a. The value of 2.22369 (2006 cents/kWh) was obtained by converting the 2005 Variable Costs contained in the Unit Information Form (UIF) dated April 21, 2005 included in the filing as HELCO-WP-2012, page 85, to 2006 dollars. The GDP Deflator value for 2005 and 2006 respectively can be located in HELCO-WP-2012, page 44.
- b. The types of expenditures are: Scheduled and Preventative Maintenance, Supplies and Consumables, Chemical Treatment, Demineralization, and Fuel Oil Treatment.
- c. Scheduled and Preventative Maintenance costs are recorded in accounts 510-514 and 541-545, depending on the type of unit and the type of equipment maintained. Supplies and consumables are recorded in accounts 506, 539, 546, 548 and 549. Chemical Treatment and Demineralization costs are recorded in account 502. Fuel Oil Treatment costs are recorded in accounts 501 and 547.
- d. The cited reference is to HELCO-WP-2012, page 85.
- e. For the purpose of estimating and calculating marginal energy costs, these are variable costs

associated with the estimated cost of production of marginal energy by HELCO generating units.

- f. Not applicable. See response to part "e" above.

CA-IR-317

Ref: HELCO Response to CA-IR-221; Miscellaneous Revenues.

Please provide the following information with respect to HELCO miscellaneous revenues:

- a. Annual transaction volumes in each year 2003, 2004, 2005 and 2006 to date subject to the Service Establishment Charge.
- b. Corresponding revenue amounts arising from the Service Establishment Charge in each year 2003, 2004, 2005 and 2006, to date, by applying the \$15 rate to the quantities in the response to part (a) of this information request.
- c. Any information required to reconcile the calculated revenue amounts in the response to part (b) of this information request into the actual recorded revenues on the Company's books in each time period.
- d. Annual transaction volumes in each year 2003, 2004, 2005 and 2006 to date subject to the Reconnection Charge.
- e. Corresponding revenue amounts arising from the Reconnection Charge in each year 2003, 2004, 2005 and 2006, to date, by applying the \$10 rate to the quantities in the response to part (d) of this information request.
- f. Any information required to reconcile the calculated revenue amounts in the response to part (e) of this information request into the actual recorded revenues on the Company's books in each time period.
- g. Annual transaction volumes in each year 2003, 2004, 2005 and 2006 to date subject to the Returned Check Charge.
- h. Corresponding revenue amounts arising from the Returned Check Charge in each year 2003, 2004, 2005 and 2006, to-date, by applying the \$15 rate to the quantities in the response to part (g) of this information request.
- i. Any information required to reconcile the calculated revenue amounts in response to part (h) of this information request into the actual recorded revenues on the Company's books in each time period.
- j. Annual transaction volumes in each year 2003, 2004, 2005 and 2006 to date subject to the Field Collection Charge.
- k. Corresponding revenue amounts arising from the Field Collection Charge in each year 2003, 2004, 2005 and 2006, to-date, by applying the \$15 rate to the quantities in the response to part (j) of this information request.
- l. Any information required to reconcile the calculated revenue amounts in the response to part (k) of this information request into the actual recorded revenues on the Company's books in each time period.

HELCO Response:

- a. The requested information is not available as HELCO does not track service establishment work. HELCO only maintains a manual log of service requests that require field work.

However, based on utilizing a service establishment charge of \$15, which is charged for each service establishment request, and the revenues as shown on HELCO-WP-710, page 1 (included in these revenues are both the Service Establishment Charge of \$15 and the same day Service Establishment Charge of \$10), the estimated volumes for each of the years are as follows:

2003	12,924
2004	13,957
2005	15,526
YTD August 2006	11,061

- b. See HELCO-WP-710, page 1 for Service Establishment charge revenue for 2003-2005.

Year-to-date August 2006 revenue is \$165,907. Included in this amount are both the Service Establishment Charge of \$15 and same day Service Establishment Charge of \$10.

- c. See response to part b.

- d. The requested information is not available as HELCO does not track reconnections.

HELCO only maintains a manual log of accounts that were cut-off for non-payment. This log does not include reconnections. However, based on utilizing a reconnection charge of \$25 (since most reconnections are same day) and the revenues as shown on HELCO-WP-710, page 1 (included in these revenues are both the Reconnection Charge of \$15 and the same day Reconnection Charge of \$10), the estimated volumes for each of the years are as follows:

2003	725
2004	1,145
2005	960

YTD August 2006 662

- e. See HELCO-WP-710, page 1 for Reconnection Fee revenue for 2003-2005. Year-to-date August 2006 revenue is \$16,555. Included in this amount are both the Reconnection Fee of \$15 and same day Reconnection Fee of \$10.
- f. See response to part e.
- g. See HELCO-WP-710, page 3, column B for the number of returned checks. Year-to-date June 2006 returned checks are 1,298 (year-to-date July 2006 is not currently available).
- h. See HELCO-WP-710, page 3, column C for returned check charge revenue for 2003-2005. Year-to-date August returned check charge revenue is \$23,205 (year-to-date June revenue is \$16,620).
- i. A reconciliation of revenue and transaction volume of returned check charge is attached as page 5 of this response. Returned checks not charged a fee are due to HELCO, bank or customer errors, such as post-dated checks, amounts do not match, closed bank accounts, no signature, etc.
- j. The number of field work documents worked in the field are as follows:

2003	9,689
2004	10,011
2005	10,954
2006	Information is not currently available.
- k. See HELCO-WP-710, page 1 for Field Collection Charge revenue for 2003-2005. Year-to-date August 2006 revenue is \$5,985.
- l. A reconciliation of revenue and transaction volume for Field Collection Charge is attached as page 6 of this response. HELCO does not assess a field collection charge in the following

situations: 1) no one home, 2) note left with occupant, 3) service limiter is installed, 4) customer of record not available to make satisfactory payment arrangement, 5) payment secured but no arrangement made, 6) arrangements to be made with credit office, 7) potentially hostile situation, 8) elderly, handicapped, or special medical attention situation, and 9) when service is disconnected for non-payment, vacant or new occupant unwilling to pay. HELCO does not charge a field collection charge after a customer is disconnected for non-payment. HELCO does charge a reconnection charge when service is restored after payment arrangements have been made.

Response to CA-IR-317, part i.

HAWAII ELECTRIC LIGHT COMPANY, INC.

<u>Line No.</u>		<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>YTD</u> <u>June 2006</u>
1	No. of Returned Checks	2,291	2,517	2,564	1,298
2	Returned Check Charge Revenue	\$31,620	\$35,325	\$32,025	\$16,620
3	No. of returned checks charged with fee (Line 2 divided by \$15)	2,108	2,355	2,135	1,108
4	No. of checks not charged with fee (Line 1 - Line 3)	183	162	429	190

Response to CA-IR-317, part I.

HAWAII ELECTRIC LIGHT COMPANY, INC.

<u>Line No.</u>		<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>YTD</u> <u>June 2006</u>
1	No. of field work documents worked in field	9,689	10,011	10,954	n/a
2	Field Collection Charge Revenue	\$4,755	\$5,980	\$10,440	\$6,165
3	No. of field collection calls charged with fee (Line 2 divided by \$15)	317	399	696	411
4	No. of cut-offs	1,333	1,676	1,563	n/a
5	No. of field calls subject to fee (Line 1 - Line 4)	8,356	8,335	9,391	n/a
4	No. of field calls not charged with fee (Line 5 - Line 3)	8,039	7,936	8,695	

CA-IR-318

Ref: HELCO Response to CA-IR-221; Miscellaneous Revenues.

In part (c) of the response, HELCO notes that the pending HECO Docket No. 04-0113 included a Company proposal to increase the returned payment charge to \$16, to increase the Field Collection Charge to \$20, increase the Service Establishment fee to \$20 and increase the Reconnection charge to \$25. Please respond to the following:

- a. Given that HECO provided cost support for increased charges to these items, does HELCO have any information supporting a conclusion that its own costs to provide field collections, service establishments, reconnections or to process returned payments have not increased?
- b. Mindful of the requested increases in these charges for HECO, for what reasons did HELCO not conduct cost studies to evaluate the reasonableness of its present charges for these items?
- c. Provide copies of the cost study information used by HECO to support its proposed higher charges, with notations of the comparable HELCO labor rates and other non-labor costs, to the extent such information is available.

HELCO Response:

- a. See response to CA-IR-221, part b.
- b. HELCO did not conduct cost studies due to limited manpower resources.
- c. The cost study information used by HECO to support its proposed higher charges is presented in HECO's 2005 rate case, Docket No. 04-0113, HECO-WP-2201. The details of comparable HELCO labor rates and other non-labor costs are not available for the reasons noted in the response to CA-IR-221, part b and in the response to part b above.

CA-IR-319

Ref: HELCO-302, page 1 of 6.

This exhibit titled "Hawaii Electric Light Company, Inc., Schedule R – Residential Service, Docket No. 05-0315 Test Year 2006, Estimate of Test-Year Revenues", refers to a spreadsheet titled "HELCO R_2006_final_rates-proposed_no e at prop.xls" in the columns titled Present Rates, Billing Units and Unit Price, and in the column titled Proposed Rates, Unit Price. Please provide a copy of the "HELCO R_2006_final_rates-proposed_no e at prop.xls" spreadsheet in electronic format, with all cell references and formulae intact and not converted to values.

HELCO Response:

The referenced requested spreadsheet is provided in electronic format with this response.

CA-IR-320

Ref: HELCO-302, page 2 of 6.

This exhibit titled "Hawaii Electric Light Company, Inc., Schedule G – General Service Non-Demand, Docket No. 05-0315 Test Year 2006, Estimate of Test-Year Revenues", refers to a spreadsheet titled "Final-GJ_2006_final_rates_adj-TY2006_update-4-25-06.xls" in the columns titled Present Rates, Billing Units and Unit Price, and in the column titled Proposed Rates, Unit Price. Please provide a copy of the "Final-GJ_2006_final_rates_adj-TY2006_update-4-25-06.xls" spreadsheet in electronic format, with all cell references and formulae intact and not converted to values.

HELCO Response:

The referenced requested spreadsheet is provided in electronic format with this response.

CA-IR-321

Ref: HELCO 302, page 4 of 6.

This exhibit titled "Hawaii Electric Light Company, Inc., Schedule H – Commercial Cooking, Heating, Air Conditioning & Refrigeration Service, Docket No. 05-0315 Test Year 2006, Estimate of Test-Year Revenues", refers to a spreadsheet titled "HELCO-h_2006_final_rates-new ecac-v3_w-prop_V3.xls" in the columns titled Present Rates, Billing Units and Unit Price, and in the column titled Proposed Rates, Unit Price. Please provide a copy of the "HELCO-h_2006_final_rates-new ecac-v3_w-prop_V3.xls" spreadsheet in electronic format, with all cell references and formulae intact and not converted to values.

HELCO Response:

The referenced requested spreadsheet is provided in electronic format with this response.

CA-IR-322

Ref: HELCO-302, page 5 of 6.

This exhibit titled "Hawaii Electric Light Company, Inc., Schedule P – Large Power Service, Estimate of Test-Year Revenues, Docket No. 05-0315 Test Year 2006," refers to a spreadsheet titled "HELCO-p_2006_final_rates-new ecac-v3-4-21-06.xls" in the columns titled Present Rates, Billing Units and Unit Price, and in the column titled Proposed Rates, Unit Price. Please provide a copy of the "HELCO-p_2006_final_rates-new ecac-v3-4-21-06.xls" spreadsheet in electronic format, with all cell references and formulae intact and not converted to values.

HELCO Response:

The referenced requested spreadsheet is provided in electronic format with this response.

CA-IR-323

Ref: HELCO 302, page 6 of 6.

This exhibit titled "Hawaii Electric Light Company, Inc., Schedule F – Street Lighting Service, Docket No. 05-0315 Test Year 2006, Estimate of Test-Year Revenues", refers to a spreadsheet titled "HELCO-f_2006_final_rates-new ecac-v3A.xls" in the columns titled Present Rates, Billing Units and Unit Price, and in the column titled Proposed Rates, Unit Price. Please provide a copy of the "HELCO-f_2006_final_rates-new ecac-v3A.xls" spreadsheet in electronic format, with all cell references and formulae intact and not converted to values.

HELCO Response:

The referenced requested spreadsheet is provided in electronic format with this response.

CA-IR-324

Ref: HELCO-305, page 1 of 1.

This exhibit titled "Hawaii Electric Light Company, Inc., Energy Cost Adjustment (ECA) Filing, Present Rates", refers to a spreadsheet titled "T3_ECAC_WP_direct presentrates+_revised.xls" in the columns BTU Mix, %, Purchased Energy Price, ¢/kwh, and Purchased Energy KWH Mix, %. Please provide a copy of the "T3_ECAC_WP_direct presentrates+_revised.xls" spreadsheet in electronic format, with all cell references and formulae intact and not converted to values.

HELCO Response:

The referenced requested spreadsheet is provided in electronic format with this response.

CA-IR-325

Ref: HELCO-307, page 1 of 2.

This exhibit titled "Hawaii Electric Light Company, Inc., Energy Cost Adjustment (ECA) Filing, Proposed Weighted Generation Efficiency Factor & DG Component", refers to a spreadsheet titled "T3_ECAC_WP_Direct_proposed rates.xls" in the columns Purchased Energy Price ¢kwh, and Purchased Energy KWH Mix, %. Please provide a copy of the "T3_ECAC_WP_Direct_proposedrates.xls" spreadsheet in electronic format, with all cell references and formulae intact and not converted to values.

HELCO Response:

The referenced requested spreadsheet is provided in electronic format with this response.

CA-IR-326

Ref: HELCO-WP-305, page 5 of 5.

This workpaper titled "Hawaii Electric Light Company, Inc., Determination of Percent of Purchased Energy Mix, Payment Rate (in ¢/kwh) and Composite Cost of Purchased Energy (in ¢/kwh), 2006 Test Year – Direct Testimony, At Present and Proposed Rates" references at the bottom HELCO-WP-502. Please provide a hard copy and an electronic copy of HELCO-WP-502, with all cell references and formulae intact and not converted to values.

HELCO Response:

The footnote reference is in error. The reference should be to HELCO-WP-545.

CA-IR-327

Ref: HELCO-WP-404, pages 26, 35 and 94.

HELCO-WP-404 page 94, title HELCO 2006 Overhaul Schedule, Test Year-Normalized (Draft - 11/18/05) indicates generating unit overhauls. Pages 26 and 35, Thermal Maintenance Summary and Combined Cycle Maintenance Summary, respectively, indicated outages that are not shown on page 94 (2006 Overhaul Schedule).

- a. Please provide a list of the Thermal Maintenance and Combined Cycle Maintenance (shown on pages 26 and 35) with a description of the maintenance outages similar to the format on page 94.
- b. Please explain the inputs on page 26 for KeahoCT4, KeahoCT5, CT4on, and CT5on. Are these inputs duplicative? Please explain.

HELCO Response:

- a. The additional outages shown in the Thermal Maintenance and Combined Cycle Maintenance (pages 26 and 35), other than what is indicated in the 2006 Overhaul Schedule (page 94), are maintenance outages associated with the assumed maintenance outage rates. An explanation of maintenance outage rates ("MOR") was provided in HELCO T-4, pages 33-35. As described in HELCO T-4, page 35, lines 6-12, the maintenance outage rates are allocated into maintenance outages by a load levelization algorithm, AUTOMNT, that is a part of the P-MONTH program. The additional outages shown in the Thermal Maintenance and Combined Cycle Maintenance files are the outages that were scheduled by AUTOMNT. HELCO-WP-404, page 101 shows the maintenance outage rates converted to weeks as rounded in the AUTOMNT algorithm. For example, Shipman 3 has a MOR of 6.82% which is rounded to 4 weeks in the AUTOMNT algorithm. This 4 week outage, or 28 days, for Shipman 3 is shown as the first outage in the Thermal Maintenance Summary on HELCO-WP-404, page 26. Please see pages 2-3 of this response for clarification of which outages are based on the MOR assumptions as scheduled by the AUTOMNT algorithm.

Reference: HELCO-WP-404, page 26

Thermal Maintenance Summary

Id	Name	Year	Month	Day	# of Days	Overhaul or MOR
2	Shipman3	2006	1	2	28	MOR
2	Shipman3	2006	10	30	28	Overhaul
3	Shipman4	2006	2	20	28	MOR
3	Shipman4	2006	6	26	28	Overhaul
4	Hill5	2006	9	4	28	Overhaul
4	Hill5	2006	11	27	21	MOR
5	Hill6	2006	1	30	21	MOR
5	Hill6	2006	5	8	56	Overhaul
6	Puna	2006	5	15	21	MOR
6	Puna	2006	7	31	28	Overhaul
10	KanoeD11	2006	10	30	7	MOR
11	WaimeD12	2006	5	8	7	MOR
12	WaimeD13	2006	1	16	7	MOR
13	WaimeD14	2006	8	14	7	MOR
14	KanoeD15	2006	6	19	7	MOR
15	KanoeD16	2006	1	23	7	MOR
16	KanoeD17	2006	1	2	7	MOR
20	Keahod21	2006	4	17	14	Overhaul
20	Keahod21	2006	9	4	7	Overhaul
20	Keahod21	2006	9	25	7	MOR
21	Keahod22	2006	5	8	7	MOR
22	Keahod23	2006	1	2	7	MOR
23	KanoeCT1	2006	3	13	7	MOR
23	KanoeCT1	2006	6	5	14	Overhaul
24	KeahodCT2	2006	2	20	28	Overhaul
24	KeahodCT2	2006	7	10	7	MOR
25	PunaCT3	2006	4	3	7	MOR
25	PunaCT3	2006	8	28	14	Overhaul
26	PGVon	2006	4	24	14	Overhaul
26	PGVon	2006	10	16	14	Overhaul
27	PGVoff	2006	4	24	14	Overhaul
27	PGVoff	2006	10	16	14	Overhaul
36	KeahodCT4	2006	1	9	7	MOR
36	KeahodCT4	2006	6	26	14	Overhaul
37	KeahodCT5	2006	3	27	7	MOR
37	KeahodCT5	2006	7	17	21	Overhaul
39	CT4on	2006	1	9	7	MOR
39	CT4on	2006	6	26	14	Overhaul
40	CT5on	2006	3	27	7	MOR
40	CT5on	2006	7	17	21	Overhaul

Reference: HELCO-WP-404, page 35

Combined Cycle Maintenance Summary

<u>Id</u>	<u>Name</u>	<u>Year</u>	<u>Month</u>	<u>Day</u>	<u># of Days</u>	<u>Overhaul or MOR</u>
10	EDC-CC	2006	3	20	7	MOR
10	EDC-CC	2006	3	20	7	MOR
10	EDC-CC	2006	3	20	7	MOR
10	EDC-CC	2006	4	9	14	CT Overhaul
10	EDC-CC	2006	4	9	3	ST Overhaul
10	EDC-CC	2006	10	2	14	CT Overhaul

- b. The outages for “KeahoCT4” and “CT4on” are the same because they represent two aspects of the same generating unit, Keahole CT-4. Similarly, “KeahoCT5” and “CT5on” represent two aspects of the same generating unit, Keahole CT-5. Keahole CT-4 is modeled in the production simulation as two separate generating units, KeahoCT4 and CT4on. Keahole CT-5 also is modeled at two separate generating units, KeahoCT5 and CT5on. As explained in HELCO T-4, pages 23-25, the Keahole units, CT-4 or CT-5, must be operated for more hours, at higher output levels, and generate more energy than they otherwise would under economic commitment and economic dispatch in order to mitigate the potential for transmission line overloads. The CT4on and CT5on units in the production simulation are modeled to operate as “must run” units during the hours from 6:00 am to 9:00 pm. The KeahoCT4 and KeahoCT5 units in the production simulation are modeled to operate as “cycling” units under economic commitment and economic dispatch. Only one “must run” unit is on at a given time; i.e., if CT4on is operating then CT5on is not. Also, only one of the two units representing Keahole CT-4 or CT-5 is on at a given time; i.e., if CT4on is operating then KeahoCT4 is not. The hourly pattern files shown on HELCO-WP-404, pages 37-52 are used to model the above mentioned constraints. The hourly pattern files for these units are as follows: KeahoCT4 is Pattern File 3, KeahoCT5 is Pattern File 4, CT4on is Pattern File 5, and CT5on is Pattern File 6. Please refer to the response to CA-IR-34 for the electronic version of these files.

CA-IR-328

Non-regulated Operations.

What, if any, of its assets or operations does HELCO treat as non-regulated or outside the jurisdiction of the Hawaii Commission? Please itemize the 2005 and estimated test year balance sheet and income statement amounts associated with any such non-regulated activities.

HELCO's Response:

HELCO treats its Interisland Communication System ("ICS") and two real estate property as non-utility property. The December 31, 2005 and estimated 2006 balance for the ICS and land are as follows:

	<u>12/31/05</u>	<u>12/31/06</u>
ICS	\$353,135.99*	\$ 0.00
Deferred Taxes On ICS	\$ 78,778.00	\$ 0.00
Land – Kikala**	\$ 1,000.00	\$ 1,000.00
Land – Wilder**	\$ 80,717.90	\$80,717.90

* net of Accumulated depreciation of \$615,376.89

** these two properties were previously recorded in Utility Property Held For Future Use

Income statement amounts that HELCO records "below the line" in Other Income and Deductions are shown on the attached for 2005 recorded and 2006 forecast year.

Hawaii Electric Light Company, Inc.
Other Income & Deductions

	2005	2006
	Recorded	Forecasted
Other Income & Deductions		
Income Taxes	24,977.43	32,607.23
SSPP interest income	195,544.96	222,319.00
Taxable interest income	11,112.72	10,469.39
OCARS interest income	18,222.30	7,598.88
AFUDC gross up	110,792.01	226,795.41
Miscellaneous deductions & amortizations	(38,542.60)	(44,974.20)
Misc non-operating income**	240,934.51	0.00
Net ICS Revenue/Expense	(27,937.10)	(43,802.20)
Donations	(11,220.00)	(10,000.00)
Other	1,400.00	0.00
Total Other Income & Deductions	525,284.23	401,013.51

** Executive life insurance proceeds - face value and cash surrender value related to death of a retired HELCO Manager. Since executive life insurance costs are excluded from O&M expenses for ratemaking purposes, the insurance proceeds were recorded "below the line" in Other Income & Deductions.

CA-IR-329

Ref: Responses to CA-IR-65 and CA-IR-2, HELCO T-5, Attachment 1D, page 2 of 3; HECO Environmental Services.

Please provide complete copies of all upstream forecasts and supporting workpapers associated with the HECO Environmental Services for HELCO Production estimated charges of \$420,801, including but not limited to:

- a. Identification of the listed personnel and positions providing the support services.
- b. Assumptions and calculations used to determine the billable hours by person.
- c. Detailed supporting calculations for each of the "standard labor rates."
- d. Detailed supporting calculations for each of the "Overhead Rate" values.
- e. Itemization of payees for the "non-labor" charges.
- f. Describe the primary work products produced for HELCO in connection with these intercompany activities

HELCO Response:

- a. The following is a listing of the divisions and positions providing the Environmental Department support services to HELCO. Please note that the labor hour forecast is prepared by Division within the Department, by taking into account the total number of personnel and available hours within a Division. The Divisions do not specifically identify the services to be provided by individual (except for the Administrative Division).
 - Administrative Division – Dept. Manager & Sr. Environmental Scientist.
 - Air Quality / Noise Division – Principal Environmental Scientist, Sr. Environmental Scientist and Environmental Scientist.
 - Chemistry Division – Laboratory Supervisor and Analytical Chemist.
 - Water & Hazardous Material Division – Principal Environmental Scientist, Sr. Environmental Scientist, Environmental Scientist and Environmental Specialist.

- b. To determine the billable hours by Division, the Divisions looked at several factors, which include 1) reviewing upcoming projects for the year to determine the necessary support needed, 2) assessing any additional environmental support that will be needed in the upcoming year, and 3) reviewing prior year(s) billable charges as an additional check. See Attachment 1, pages 1 to 4 for the 2006 labor hour forecast charged by the HECO

Environmental Department to HELCO Production Department:

- Administrative Division: 6 hours (Labor Class: Enabler @ \$54.59/hr.) and 310 hours (Labor Class: Water and Hazmat Scientist @ \$33.62/hr.) for services involving the compliance with ongoing permit and/or regulatory requirements for air (activity 875), wastewater (activity 876), solid and hazardous waste-oil related (activity 877), and solid and hazardous waste-non-oil related (activity 878) at Keahole, Puna, Hill, Waimea, or Shipman.
- Air Quality/Noise Division: 2,634 hours (Labor Class: Air/Noise Scientist @ \$37.36/hr.) for services requiring the application for and to obtain environmental permits – air (activity 865), and complying with ongoing permit and/or regulatory requirements – air (activity 875) at Keahole, Shipman, Puna, Kanoelehua, Waimea, Panaewa, Ouli, Punaluu, Kapua, or Hill.
- Chemistry Division: 2,000 hours (Labor Class: Chemist @ \$31.07/hr.) for services requiring compliance with ongoing permit and/or regulatory requirements – wastewater (activity 876) at Hill, Keahole, Puna, or Shipman.
- Water and Hazardous Materials Division: 2,221 hours (Labor Class: Water/Haz Mat Scientist @ \$33.62/hr.) for conducting employee training (activity 788); applying for and obtaining environmental permits – water (activity 866); complying with ongoing

permit and/or regulatory requirements – wastewater (activity 876), solid and hazardous waste – oil related (activity 877) and exemptions – solid and hazardous waste – non oil related (activity 878) at Keahole, Puna, Hill Waimea, Shipman, or Kanoelehua.

- c. Detailed “standard labor rates” provided by HECO General Accounting are in Attachment 2.
- d. Detailed “Overhead Rate” values provided by HECO General Accounting are in Attachment 3.
- e. Itemization of payees for the “non-labor” charges. (See Attachment 1, pages 5 to 8 for additional support of the HECO Environmental Services forecast.)
 - 1. Inter-island Travel & Airport Parking – The forecast of \$17,760 represents inter-island flights to HELCO, hotel accommodations, car rentals and parking at the airport for Administrative, Air Quality/Noise, and Water and Hazardous Materials Divisions staff.
 - 2. Materials – The forecast of \$18,450 represents consumable supplies and equipment used on HELCO’s behalf by the Chemistry, and Water and Hazardous Materials Divisions. Following is a list of suppliers that could potentially supply materials for this work: Air Gas, Air Liquide, Agilent, Alpha, Astoria-Pacific, CEM, CPI International, ERA, Fisher Scientific, Hawaii Chemical, NIST, Perkin Elmer, Qorpack, Supelco and Ultra Scientific.
 - 3. Outside Services – The forecast of \$600 represents miscellaneous outside services for the Chemistry Division.
 - 4. Outside Services – Environmental. The forecast of \$13,800 represents costs associated with laboratory waste disposal and equipment maintenance, plus costs for analytical services that cannot be done in-house and anticipated to be incurred by the Chemistry

Division. Typically these analytical services are provided by local (Test America Hawaii) and off-island laboratories (SGS, Alaska).

5. Meals – The forecast of \$970 represents meals for the Water and Hazardous Materials Division personnel who stay overnight to provide services to HELCO.
- f. HECO will provide environmental services (e.g. strategic and tactical management of and compliance with all environmental permits and regulatory requirements) including but not limited to air, water quality, wastewater, solid and hazardous wastes, hazardous materials and noise compliance for all HELCO plant locations.

used for
Intercompany Billing Form.

Environmental Department Administrative Division 2006 Labor Hour Forecast												
	Prior Year 2005 Budget				2004 Actuals				Current Year 2006 Budget			
	SL	AF	SS	CA	SL	AF	SS	CA	SL	AF	SS	CA
PROJECTS from												
From Pillar Project file - Capital	0	0	0	0	65	16		18				
From Pillar Project file - Billable				12	9	30		26				
Projects, Total:	0	0	0	12	74	46	0	44	0	0	0	0
NON-PROJECTS (Act/Loc/Ind)												
Billables												
HELCO (875/CNS/BE)-Keehole			3	12								10
HELCO (875/CNS/BE)-Keehole (Audit)									2			45
HELCO (875/PST/BE)-Puna				4								10
HELCO (876/RST/BE)-Hil			4	36								15
HELCO (875/BNS/BE)-Waimea												10
HELCO (878/CNS/BE)-Keehole				12								10
HELCO (878/CNS/BE)-Keehole (Audit)									2			45
HELCO (876/PST/BE)-Puna				4								10
HELCO (876/RST/BE)-Hil			5	7								10
HELCO (878/SST/BE)-Shipman				8								0
HELCO (876/BNS/BE)-Waimea												0
HELCO (877/PST/BE)-Puna				48								10
HELCO (877/RST/BE)-Hil			4	4								10
HELCO (877/BNS/BE)-Waimea												10
HELCO (877/HEL/BE)-HELCO T&D												50
HELCO (878/HEL/BE)-Helco				36								25
HELCO (878/PST/BE)-Puna				48								10
HELCO (878/CNS/BE)-Keehole (Audit)									2			40
HELCO (878/BNS/BE)-Waimea												10
HELCO (878/HEL/BE)-HELCO T&D												50
HELCO (878/RST/BE)-Hil				36								10
Helco Billable, Total:	0	16	204	51	0	0	0	0	6	0	410	0
MECO												
MECO (875/GNS/BE)-Mokuaui Pelaeu				12								10
MECO (875/LNS/BE)-Lanai Mid Basin				6								50
MECO (876/LNS/BE)-Lanai Mid Basin (Audit)												
MECO (876/MNS/BE)-Maialae				26								
MECO (875/NST/BE)-Kahului				84								
MECO (876/MNS/BE)-Maialae			5									10
MECO (876/NST/BE)-Kahului			9	84								10
MECO (876/MAU/BE)-Kahului Baseyard (Audit)									2			20
MECO (877/MAU/BE)-Kahului Baseyard (Audit)									2			125
MECO (877/MAU/BE)-Meco Energy Del				84								50
MECO (877/MNS/BE)-Maialae			12	84								10
MECO (877/NST/BE)-Kahului			6	120								10
MECO (878/MNS/BE)-Maialae				84								10
MECO (878/MAU/BE)-Kahului Baseyard (Audit)									2			45
MECO (878/MAU/BE)-Meco Energy Del												50
MECO (878/NST/BE)-Kahului				72								10
Meco Billable, Total:	0	32	612	62	0	0	0	0	10	0	410	0
O&M												
Org Dev Meetings (720/PHE/NE)	518	126										
Maintain Rel w/Legislators (745/PHE/NE)	229											
Process Payroll (777/PHE/NE)		100		251								
Attend Training (789/PHE/NE)	80	32										
CAA Audit (875/KST/NE)				64								
General Support to Air Division (875/PHE/NE)	352	537		584								
General Support to Water Division (878/PHE/NE)	665	989		707								
Audits (876/KST/NE)				84								
Audits (877/KST/NE)				120								
Audits (877/WRD/NE)				259								
Audits (877/WST/NE)				180								
Audits (878/KST/NE)				144								
Audits (878/WRD/NE)				84								
Audits (878/WST/NE)				96								
Audits (877/PDO/NE) - Koolau									2			65
Audits (878/PDO/NE) - Koolau									2			80
Audits (877/HST/NE) - Iwalei									2			80

Production
210 hours

T&D
100 hours

Production

B-WS-05

B-WS-06

Environmental Department			
Air Quality/Noise Division			
2006 Labor Hour Forecast			
	Budget	Actual	
	Prior Year		Current Year
	2005	2004	2006
	PJB	PJB	PJB
PROJECTS from			
From Jan. '04 Pillar Project File	0		
From July '03 Pillar Project File (HECO Projects)-CAPITAL	468	1,495	
From July '03 Pillar Project File (Billable Projects)	2,508	2,464	
Projects, Total:	2,976	3,959	0
NON-PROJECTS (Act/Loc/Ind)			
Billables			
HELCO:			
HGA Keahole Compliance Training (788/CNS/BE)	120		0
HGA Shipman Air Permit Renewal (865/SST/BE)	84		72
HGA Puna Air Permit Renewal (865/PST/BE)			144
HGA Keahole Air Permit Renewal (865/CNS/BE)			72
HGA Kanoelehua Air Compliance (875/ANS/BE)	84		192
HGA Waimea Air Compliance (875/BNS/BE)	108		186
HGA Keahole Air Compliance (875/CNS/BE)	264		624
HGA Panaewa DG Compliance (875/D24/BE)	36		72
HGA Ouli DG Compliance (875/D25/BE)	36		72
HGA Punaluu DG Compliance (875/D26/BE)	36		72
HGA Kapua DG Compliance (875/D27/BE)	36		72
HGA Puna CT3 Compliance (875/P03/BE)	336		288
HGA Puna Steam Compliance (875/PST/BE)	228		192
HGA Hill Air Compliance (875/RST/BE)	156		384
HGA Shipman Air Compliance (875/SST/BE)	120		192
HGA Keahole Noise (879/CNS/BE)	96		0
HGA Puna Steam Noise (879/PST/BE)	336		0
Helco Billable, Total	2,076	0	2,634 / Production
MECO:			
Miki Basin Compliance Training (788/LPO/BE)	84		0
MGT Molokai Palaaui Air Permitting (865/GNS/BE)	24		144 /
Miki Basin Air Permit Renewal (865/LNS/BE)			144 /
MGM Hana Permit Renewal (865/MHN/BE)	60		0
Maalaea Air Permit Renewal (865/MNS/BE)	156		0
Kahului Air Permit Renewal (865/NST/BE)	84		0
MGT Palaaui Air Permit Compliance (875/GNS/BE)	240		288 /
Miki Basin Permit Compliance (785/LNS/BE)	276		288 /
Hana Air Permit Compliance (785/MHN/BE)	84		120 /
Maalaea Air Permit Compliance (875/MNS/BE)	984		624 /
Maalaea M12 Opacity (875/MNS/BE)	120		0
Maalaea M13 Opacity (875/MNS/BE)	96		0
Kahului Air Permit Compliance (875/NST/BE)	84		336 /
Maalaea Noise Compliance (879/MNS/BE)	12		0
Kahului Noise Compliance (879/NST/BE)	12		0
Meco Billable, Total	2,316	2,357	1,944

Environmental Dept. Chemistry Division 2006 Labor Forecast										Budget	Actual	Current Year
RA	LbrClass	Act	Loc	Ind	Proj	EE	Line Item	FY05	FY06			FY06
PJC	J_CHEMST						Supply - Available Hours	12,480				14,560
NON-PRODUCTIVE												
PJC	J_CHEMST	98	PHE	ND	NPJZZZZZ		107 Holiday	-576				-784
PJC	J_CHEMST	98	PHE	ND	NPJZZZZZ		107 Vacation	-920				-840
							TOTAL NON-PRODUCTIVE	-1,496	-1,899			-1,824
BILLABLE												
PJC	J_CHEMST	241	GNS	BE	NPJZZZZZ	150	MGT M00841 001 FUEL OIL MOLOKAI (G0000480)	-24	108			-135
PJC	J_CHEMST	241	LNS	BE	NPJZZZZZ	150	MGL M00837 002 FUEL OIL LANAI (G0000489)	-80	86			-125
PJC	J_CHEMST	241	MNS	BE	NPJZZZZZ	150	MGM M00838 001 FUEL OIL MAALAE (G0000484)	-300	939			-1,000
PJC	J_CHEMST	241	NST	BE	NPJZZZZZ	150	MKG M00836 001 FUEL OIL KAHULUI (G0000447)	-120	784			-800
PJC	J_CHEMST	349	MAU	BE	NPJZZZZZ	150	MDE M00408 MECO TSF OIL (E0000770)	-120	157			-800
PJC	J_CHEMST	878	MNS	BE	NPJZZZZZ	150	MGM M00838 003 MAALAE WASTEWATER (G0000460)	-420				
PJC	J_CHEMST	878	NST	BE	NPJZZZZZ	150	MKG M00836 003 KAHULUI WASTEWATER (G0000443)	-180				
PJC	J_CHEMST	877	GNS	BE	NPJZZZZZ	150	MGT M00841 004 MOLOKAI OIL-RELATED (G0000478)	-24				
PJC	J_CHEMST	877	LNS	BE	NPJZZZZZ	150	MGL M00837 005 LANAI OIL-RELATED (G0000488)	-24				
PJC	J_CHEMST	877	MAU	BE	NPJZZZZZ	150	MDE M16915/001 MECO TSF OIL-PCB (E0008355)	-360				
PJC	J_CHEMST	877	MNS	BE	NPJZZZZZ	150	MGM M00838 004 MAALAE OIL-RELATED (G0000462)	-24				
PJC	J_CHEMST	878	MNS	BE	NPJZZZZZ	150	MGM M00838 005 MAALAE NON-OIL (G0000466)	-180				
PJC	J_CHEMST	878	NST	BE	NPJZZZZZ	150	MKG M00836 005 KAHULUI NON-OIL (G0000449)	-60				
							MECO Total	-1,896	2,051			-2,500
PJC	J_CHEMST	241	RST	BE	NPJZZZZZ	150	HGA H00249 001 FUEL OIL HILL (G0000424)	-300				
PJC	J_CHEMST	349	HAH	BE	NPJZZZZZ	150	HDC H00841 001 HELCO TSF OIL (E0000766)	-300	180			-500
PJC	J_CHEMST	878	CNS	BE	NPJZZZZZ	150	HGA H00285 001 KEAHOE WASTEWATER (G0000401)	-180	211			-350
PJC	J_CHEMST	878	PST	BE	NPJZZZZZ	150	HGA H00286 000 PUNA WASTEWATER (G0000430)	-180	427			-400
PJC	J_CHEMST	878	RST	BE	NPJZZZZZ	150	HGA H00288 001 HILL WASTEWATER (G0000422)	-540	729			-850
PJC	J_CHEMST	878	SST	BE	NPJZZZZZ	150	HGA H00289 001 SHIPMAN WASTEWATER (G0000415)	-120	552			-400
PJC	J_CHEMST	877	RST	BE	NPJZZZZZ	150	HGA H00295 001 HILL OIL-RELATED (G0000423)	-24				
PJC	J_CHEMST	878	CNS	BE	NPJZZZZZ	150	HGA H00300 001 KEAHOE NON-OIL (G0000405)	-20				
PJC	J_CHEMST	878	PST	BE	NPJZZZZZ	150	HGA H00301 001 PUNA NON-OIL (G0000433)	-60				
PJC	J_CHEMST	878	RST	BE	NPJZZZZZ	150	HGA H00303 001 HILL NON-OIL (G0000426)	-120				
PJC	J_CHEMST	878	SST	BE	NPJZZZZZ	150	HGA H00313 001 SHIPMAN NON-OIL (G0000419)	-24				
							HELCO Total					-2,500
							TOTAL BILLABLE	-3,784	-4,143			-5,060
OUTSIDE BILLABLE												
PJC	J_CHEMST	878	OUT	BN	NPJZZZZZ	150	NON-UTILITY WATER (G0000483)	-80				-80
PJC	J_CHEMST	877	OUT	BN	NPJZZZZZ	150	NON-UTILITY OIL-RELATED (G0000482)	-24				-30
							TOTAL OUTSIDE BILLABLE	-84	-17			-80
O&M												
PJC	J_CHEMST	241	HST	NE	NPJZZZZZ	150	HST FUEL OIL (G0000364)	-120				
PJC	J_CHEMST	241	KST	NE	NPJZZZZZ	150	KST FUEL OIL (G0000380)	-470	720			-2,000
PJC	J_CHEMST	241	KST	NE	NPJZZZZZ	150	Update July 02 - Fuel Oil QA/QC (G0007644)	-24				
PJC	J_CHEMST	241	WST	NE	NPJZZZZZ	150	WST FUEL OIL (G0000378)	-470	1,843			-1,500
PJC	J_CHEMST	245	HST	NE	NPJZZZZZ	150	HST MAINTAIN BOILER (G0002573)	-30				
PJC	J_CHEMST	245	KST	NE	NPJZZZZZ	150	KST MAINTAIN BOILER (G0002575)	-120				
PJC	J_CHEMST	245	WST	NE	NPJZZZZZ	150	WST MAINTAIN BOILER (G0002574)	-120				
PJC	J_CHEMST	344	OAQ	NE	NPJZZZZZ	150	HECO TSF SHOP (E0000756)	-300	652			-750
PJC	J_CHEMST	349	OAQ	NE	NPJZZZZZ	150	HECO SS (E0000757)	-336	394			-900
PJC	J_CHEMST	701	PHE	NE	NPJZZZZZ	150	DEV & MANAGE FORECASTS	-60				
PJC	J_CHEMST	720	PHE	NE	NPJZZZZZ	150	ORG DEV MEETINGS (G0001519)	-24				
PJC	J_CHEMST	745	PHE	NE	NPJZZZZZ	150	RELATIONS WITH REGULATORS	-20				
PJC	J_CHEMST	749	PHE	NE	NPJZZZZZ	150	RELATIONS WITH INDUSTRY	-20				
PJC	J_CHEMST	760	PHE	NE	NPJZZZZZ	150	RELATIONS WITH CUSTOMERS	-60				
PJC	J_CHEMST	763	PHE	NE	NPJZZZZZ	150	COMMUNITY SERVICE	-20				
PJC	J_CHEMST	777	PHE	NE	NPJZZZZZ	150	PROCESS PAYROLL	-48				
PJC	J_CHEMST	785	PHE	NE	NPJZZZZZ	150	PERFORMANCE APPRAISALS	-20				
PJC	J_CHEMST	789	PHE	NE	NPJZZZZZ	150	ATTEND TRAINING (G0002898)	-142	384			-380
PJC	J_CHEMST	797	PHE	NE	NPJZZZZZ	150	ATTEND SAFETY TRAINING	-144				
PJC	J_CHEMST	842	PHE	NE	NPJZZZZZ	150	ORDER MATERIALS	-48				
PJC	J_CHEMST	843	PHE	NE	NPJZZZZZ	150	PROCESS INVOICES	-12				
PJC	J_CHEMST	878	HST	NE	NPJZZZZZ	150	HST WASTEWATER (G0000360)	-360	372			-550
PJC	J_CHEMST	878	KST	NE	NPJZZZZZ	150	KST WASTEWATER (G0000364)	-1,173				
PJC	J_CHEMST	878	PHE	NE	NPJZZZZZ	150	MISCELLANEOUS & O&H HOURS	-1,151	-3,350			-1,806
PJC	J_CHEMST	878	WST	NE	NPJZZZZZ	150	Update July 02 - Wastewater QA/QC (G0007642)	-300				
PJC	J_CHEMST	878	WST	NE	NPJZZZZZ	150	WST WASTEWATER (G0000372)	-1,173				
PJC	J_CHEMST	877	HST	NE	NPJZZZZZ	150	HST OIL-RELATED (G0000363)	-60				

R-WS-02B

Production
2,000

500

Environmental Dept.												
Water & Hazardous Materials Division												
2006 Labor Forecast												
										Budget	Actual	
										Prior Year		
RA	LbrClass	Act	Loc	Ind	Proj	EE	Line Item			FY06	FY04	FY06
PJW	J_WHMSCI						Supply-Available Hours			14,580		14,580
PJW	J_WHMSCI	98	PHE	ND	NPJZZZZZ	107	Holidays			-782		-784
PJW	J_WHMSCI	98	PHE	ND	NPJZZZZZ	107	Vacation			-752		-800
							TOTAL NON-PRODUCTIVE			-1,544	-1,817	-1,584
PJW	J_WHMSCI	788	CNS	BE	NPJZZZZZ	150	HGA - Conduct Training-Keahole			-24		44
PJW	J_WHMSCI	788	PST	BE	NPJZZZZZ	150	HGA - Conduct Training-Puna			-12		36
PJW	J_WHMSCI	788	RST	BE	NPJZZZZZ	150	HGA H18840 001-Hill			-36		24
PJW	J_WHMSCI	788	SST	BE	NPJZZZZZ	150	HGA H18840 004-Shipman			-80		16
PJW	J_WHMSCI	886	CNS	BE	NPJZZZZZ	150	HGA H18843 005-Keahole			-24		0
PJW	J_WHMSCI	886	RST	BE	NPJZZZZZ	150	HGA H18843 002-Hill			-84		38
PJW	J_WHMSCI	886	SST	BE	NPJZZZZZ	150	HGA H18843 001-Shipman			-120		38
PJW	J_WHMSCI	886	PST	BE	NPJZZZZZ	150	HGA Puna					38
PJW	J_WHMSCI	876	BNS	BE	NPJZZZZZ	150	HGA H18945 005-Waimea			-24		8
PJW	J_WHMSCI	876	CNS	BE	NPJZZZZZ	150	HGA H18945 006-Keahole			-72		240
PJW	J_WHMSCI	876	CNS	BE	NPJZZZZZ	150	HGA H18945 006-Keahole			-156		0
PJW	J_WHMSCI	876	HEL	BE	NPJZZZZZ	150	HDE H18792 004-Helco			-24		50
PJW	J_WHMSCI	876	PST	BE	NPJZZZZZ	150	HGA H18945 003-Puna			-24		114
PJW	J_WHMSCI	876	PST	BE	NPJZZZZZ	150	HGA H18945 003-Puna			-24		0
PJW	J_WHMSCI	876	RST	BE	NPJZZZZZ	150	HGA H18845 002-Hill			-84		380
PJW	J_WHMSCI	876	RST	BE	NPJZZZZZ	150	HGA H18845 002-Hill			-60		0
PJW	J_WHMSCI	876	SST	BE	NPJZZZZZ	150	HGA H18945 001-Shipman			-144		536
PJW	J_WHMSCI	876	SST	BE	NPJZZZZZ	150	HGA H18945 001-Shipman			-120		0
PJW	J_WHMSCI	877	BNS	BE	NPJZZZZZ	150	HGA H18844 005-Waimea			-12		44
PJW	J_WHMSCI	877	CNS	BE	NPJZZZZZ	150	HGA H18844 006-Keahole			-108		108
PJW	J_WHMSCI	877	HEL	BE	NPJZZZZZ	150	Energy Delivery (Oil, PCBs, Audits, etc.)					739
PJW	J_WHMSCI	877	PST	BE	NPJZZZZZ	150	HGA H18844 003-Puna			-48		76
PJW	J_WHMSCI	877	RST	BE	NPJZZZZZ	150	HGA H18844 002-Hill			-48		82
PJW	J_WHMSCI	877	SST	BE	NPJZZZZZ	150	HGA H18844 001-Shipman			-60		142
PJW	J_WHMSCI	878	ANS	BE	NPJZZZZZ	150	HGA H18847 004-Kanoetehua			-12		12
PJW	J_WHMSCI	878	BNS	BE	NPJZZZZZ	150	HGA H18847 005-Waimea			-12		28
PJW	J_WHMSCI	878	CNS	BE	NPJZZZZZ	150	HGA H18847 006-Keahole			-24		45
PJW	J_WHMSCI	878	HEL	BE	NPJZZZZZ	150	HDE H18794 004-Helco			-300		212
PJW	J_WHMSCI	878	PST	BE	NPJZZZZZ	150	HGA H18847 007-Puna Unit 1			-12		0
PJW	J_WHMSCI	878	PST	BE	NPJZZZZZ	150	HGA H18847 003-Puna			-12		40
PJW	J_WHMSCI	878	RST	BE	NPJZZZZZ	150	HGA H18847 002-Hill			-80		68
PJW	J_WHMSCI	878	SST	BE	NPJZZZZZ	150	HGA H18847 001-Shipman			-36		58
PJW	J_AIRSPE	878	CNS	BE	NPJZZZZZ	150	HGA H13745 006-Keahole			-120		
PJW	J_AIRSPE	878	PST	BE	NPJZZZZZ	150	HGA H13745 003-Puna			-62		
PJW	J_AIRSPE	878	RST	BE	NPJZZZZZ	150	HGA H13745 002-Hill			-158		
PJW	J_AIRSPE	878	SST	BE	NPJZZZZZ	150	HGA H13745 001-Shipman			-156		
							HELCO Totals					3,222
PJW	J_WHMSCI	788	MAL	BE	NPJZZZZZ	150	M15316 006-Lanai			-24		18
PJW	J_WHMSCI	788	MAM	BE	NPJZZZZZ	150	M15317 005-Molokai			-24		18
PJW	J_WHMSCI	788	MAU	BE	NPJZZZZZ	150	MDE M15885 003-Maui			-36		74
PJW	J_WHMSCI	788	MPO	BE	NPJZZZZZ	150	M11290 003 - Maalaea			-60		24
PJW	J_WHMSCI	788	MPO	BE	NPJZZZZZ	150	M15313 009 - Kahului			-60		24
PJW	J_WHMSCI	788	MPO	BE	NPJZZZZZ	150	M15314 010 - Maalaea			-60		0
PJW	J_WHMSCI	886	MNS	BE	NPJZZZZZ	150	MGM M15314 004-Maalaea			-120		0
PJW	J_WHMSCI	886	INST	BE	NPJZZZZZ	150	MGK 15313 003-Kahului			-120		0
PJW	J_WHMSCI	878	MAU	BE	NPJZZZZZ	150	MDE M15885 004-Maui			-24		0
PJW	J_WHMSCI	876	MNS	BE	NPJZZZZZ	150	MGM M15314 006-Maalaea			-120		200
PJW	J_WHMSCI	876	MNS	BE	NPJZZZZZ	150	MGM M15314 006-Maalaea			-72		0
PJW	J_WHMSCI	878	NST	BE	NPJZZZZZ	150	MGK M15313 005-Kahului			-264		684
PJW	J_WHMSCI	878	NST	BE	NPJZZZZZ	150	MGK M15313 005-Kahului			-72		0
PJW	J_WHMSCI	877	GNS	BE	NPJZZZZZ	150	MGT M15317 003-Paieau			-24		76
PJW	J_WHMSCI	877	LNS	BE	NPJZZZZZ	150	MGL M15316 004-Lanai Miki Basin			-12		68
PJW	J_WHMSCI	877	MAU	BE	NPJZZZZZ	150	MDE M15885 001-Maui			-300		577
PJW	J_WHMSCI	877	MAU	BE	NPJZZZZZ	150	Hana Standby Generators					38

T-0
100

Prod
2,221

RWS-03

RWS-05

Environmental Department				
Administrative Division				
2006 Non-Labor Forecast				
		Prior Year		
		Budget	Actual	Budget
	Cost	2005	2004	2006
	Type	JA	JA	JA
NON-PROJECTS (Act/Loc/Ind)				
Billables				
HELCO (875/CNS/BE) - Keahole Audits	522	204		(A) 204
HELCO (875/RST/BE) - Hill	522	204		
HELCO (875/PST/BE) - Puna				(A) 204
HELCO (876/CNS/BE) - Keahole	522	204		(A) 204
HELCO (876/CNS/BE) - Keahole Audit				(A) 204
HELCO (877/HEL/BE) - Helco	522	396		
HELCO (877/SST/BE) RCRA Used Oil Audit-Trip-Shipman	522	196		
HELCO (877/BNS/BE) - Waimea				(A) 204
HELCO (877/HEL/BE) - HELCO T&D			T & O	204
HELCO (878/PST/BE) - Puna	522	204		
HELCO (878/RST/BE) - Hill	522	204		
Helco Billables		1,612	173	1,020
MECO (875/MHN/BE)-Hana Standby Generators	522	196		
MECO (875/NST/BE) Trips for Audit - Kahalul	522	204		
MECO (875/LNS/BE) Trips for Audit - Miki Basin				204
MECO (876/MNS/BE) Trips for NPDES Audit-Maalaea	522	204		
MECO (876/NST/BE) - Kahalul	522	204		204
MECO (877/MAU/BE) Trips for PCB Audit-Maui	522	204		
MECO (877/MAU/BE) Trips for Audit-Maui			R-WS-05	204
MECO (878/MAU/BE) Trips for Audit-Maui			R-WS-06	204
MECO (877/MNS/BE)-Maalaea	522	204		
MECO (877/NST/BE) Audit Trips - Kahalul	522	204		
MECO (878/MNS/BE) - Maalaea	522	204		
MECO (878/NST/BE) Trips for Audit - Kahalul	522	204		
Meco Billables		1,828	394	816
Non-Project Billables, Total:		3,440	567	1,836
O&M				
Office Supplies (875/PHE/NE)	201	1,200		
Office Supplies (875/PHE/NE)	205	3,000		
Office Supplies (876/PHE/NE)	205	3,000		
		7,200	4,355	0
Dept. Vehicle (720/PHE/NE)	301	4,960	6,927	0
PC Software Purchase (875/PHE/NE)	462	6,274	446	0
Corp Trend (789/PHE/NE)	501	3,200		
Training, Local (789/PHE/NE)	501	1,604		
Cellular Phone Svc (875/PHE/NE)	501	600		
Pagers (875/PHE/NE)	501	100		
Misc-Printing, Utilities, membership fees, dues (875/PHE/NE)	501	1,400		
		6,904	11,193	0

Production
EA = \$8800

Inter-island
Travel &
Parking

T&D

Environmental Department						
Air Quality/Noise Division						
2006 Non-Labor Forecast						
		Budget	Actual		Current Year	
	Cost	Prior Year			Forecast	
	Type	2005	2004		2006	
NON-PROJECTS (Act/Loc/Ind)						
Billables						
HGA Waimea CSP Renewal (865/BNS/BE)	522				600	
HGA Puna CSP Renewal (865/PST/BE)	522				600	
HGA Keahole CSP Renewal (865/CNS/BE)	522				600	
HGA Kanoelehua Air Permit Renewal (865/ANS/BE)	522	100			0	
HGA Hill Air Permit Renewal (865/RST/BE)	522	100	171		0	
HGA Shipman Air Permit Renewal (865/SST/BE)	522	500			0	
HGA Waimea Air Compliance (875/BNS/BE)	522	200			600	
HGA Keahole Air Compliance (875/CNS/BE)	522	1,500	1,075		1,200	
HGA Puna CT3 Compliance (875/P03/BE)	522	500	315		600	
HGA Puna Steam Compliance (875/PST/BE)	522				600	
HGA Hill Air Compliance (875/RST/BE)	522	500			1,200	
HGA Kanoelehua Compliance (875/ANS/BE)	522				600	
HGA Shipman Air Compliance (875/SST/BE)	522	500	10		600	
HGA Keahole Noise (879/CNS/BE)	522	500			0	
Helco	201	0	100		0	
Helco	501	0	3,009		0	
Total Helco		4,400	4,880		7,200	
Miki Basin Permit Renewal (865/LNS/BE)	522	200			300	
Maalaea Air Permit Renewal (865/MNS/BE)	522	500			300	
MGK Kahului Air Permit Renewal (865/NST/BE)	522	500	8		0	
MGT Palaa Air Permit Compliance (875/GNS/BE)	522	1,000			300	
Miki Basin Permit Compliance (875/LNS/BE)	522	1,000			300	
Maalaea Air Permit Compliance (875/MNS/BE)	522	1,000	2,505		1,200	
MGK Kahului Air Permit Compliance (875/MNS/BE)	522	500			600	
Meco	201	0	358		0	
Meco	501	0	223		0	
Meco	508	0	116		0	
Meco	520	0	163		0	
Meco	521	0	17		0	
Total Meco		4,700	3,391		3,000	
Non-Project Billables, Total:		9,100	8,071		10,200	
HECO O&M						
Outside Materials Purchase for Office (875/PHE/NE)	201	2,500	5,214		0	
Trailer (875/PHE/NE)	301	2,964			3,600	
Vehicle, Assigned, Truck (875/PHE/NE)	301	22,000			24,000	
		24,964	13,287		27,600	
PC Software Purchase (875/PHE/NE)	462	5,000	0		3,000	
Honolulu Emission Fees (875/HST/NE)	501	35,000			60,000	
Kahe Emission Fees (875/KST/NE)	501	475,000			720,000	
Waiau Emission Fees (875/WST/NE)	501	290,000			420,000	
AT&T Cell Phone for S. Oshiro (875/PHE/NE)	501	1,200			0	
AT&T Cell Phone (875/PHE/NE)	501	1,200			3,000	

Production
Inter-Island
Travel +
Parking

Environmental Dept. Chemistry Division 2006 Non-Labor Forecast						Budget		Current Year FY06	
*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Prior Year FY05	Actual FY04		
BILLABLE									
PJC	241	LNS	BE	NPJZZZZ	201	MGL M07154 001 LANAI FUEL OIL (G0000489)	240	141	800
PJC	241	MNS	BE	NPJZZZZ	201	MGM M07156 001 MAALAEA FUEL OIL (G0000484)	1,260		8000
PJC	241	NST	BE	NPJZZZZ	201	MGK M071534 001 KAHULUI FUEL OIL (G0000447)	618		5000
PJC	349	MAU	BE	NPJZZZZ	201	MDE M15916/002 MECO TSF OIL-DGA (E0000770)	278	2,282	5000
PJC	876	MNS	BE	NPJZZZZ	201	MGM M00838 003 MAALAEA WASTEWATER (G0000480)	3,000	8,577	
PJC	876	NST	BE	NPJZZZZ	201	MGK M00386 003 KAHULUI WASTEWATER (G0000443)	2,772	4,885	
PJC	877	MAU	BE	NPJZZZZ	201	MDE M15916/001 MECO TSF OIL-PCB (E0008365)	804		
PJC	877	GNS	BE		201	Molokai Palaeu (G0000480)	0	1,145	800
PJC	876	NST	BE		501	Kahului	0	80	200
PJC	876	MNS	BE		501	Maialaea	0	120	200
PJC	241	GNS	BE		508	Molokai: Palaeu	0	1,493	1300
PJC	877	LNS	BE		508	Lanai: m.k. Basin	0	125	200
PJC	349	MAU	BE		508	Maui: T&D	0	393	400
PJC	876	MNS	BE		508	Maialaea	0	1,330	1000
PJC	876	NST	BE		508	Kahului	0	2,671	3000
TOTAL BILLABLE - MECO						8,868	21,243	25,500	
PJC	241	RST	BE	NPJZZZZ	201	HGA H00249 001 HILL FUEL OIL (G0000424)	998		
PJC	349	HAH	BE	NPJZZZZ	201	HDC H00841 001 HELCO TSF OIL (E0000766)	1,200	2,578	3000
PJC	876	CNS	BE	NPJZZZZ	201	HGA H00286 001 KEAHOLE WASTEWATER (G0000401)	528	1,219	3000
PJC	876	HST	NE	NPJZZZZ	201	HST WASTEWATER (G0000380)	3,192		3000
PJC	876	PST	BE	NPJZZZZ	201	HGA H00286 000 PUNA WASTEWATER (G0000430)	540	2,715	3000
PJC	876	RST	BE	NPJZZZZ	201	HGA H00288 001 HILL WASTEWATER (G0000422)	3,000	6,506	7500
PJC	876	SST	BE	NPJZZZZ	201	HGA H00289 001 SHIPMAN WASTEWATER (G0000415)	540	2,982	3000
PJC	876	PST	BE		501	Puna	0	80	200
PJC	876	SST	BE		501	Shipman	0	80	200
PJC	876	RST	BE		501	Hill	0	315	200
PJC	876	CNS	BE		508	Keahole	0	558	1000
PJC	349	HAH	BE		508	Helco	0	823	800
PJC	876	PST	BE		508	Puna	0	5,031	5300
PJC	876	RST	BE		508	Hill	0	4,161	4300
PJC	876	SST	BE		508	Shipman	0	3,066	3200
TOTAL BILLABLE-HELCO						9,998	30,092	35,000	
OUTSIDE BILLABLE									
PJC	10	OUT	BN	NPJZZZZ	905	Non-utility Revenue	-3,384	-471	-1000
PJC	40	OUT	BN	NPJZZZZ	501	General Excise Tax	144		50
OUTSIDE BILLABLE						-3,240	-471	-950	
O&M									
PJC	241	HST	NE	NPJZZZZ	201	HST (G0000360)			8000
					201	TSF SHOP TSF OIL (E0000756)			6000
					201	SYS OPS TSF OIL (E0000757)			11000
PJC	241	HST	NE	NPJZZZZ	201	HST FUEL OIL (G0000364)	1,044		
PJC	241	KST	NE	NPJZZZZ	201	KST FUEL OIL (G0000390)	2,220		30000
PJC	241	WST	NE	NPJZZZZ	201	WST FUEL OIL (G0000378)	2,220		26000
PJC	876	KST	NE	NPJZZZZ	201	KST WASTEWATER (G0000384)	18,492		
PJC	876	PHE	NE	NPJZZZZ	201	Stationary Supplies	2,640		2500
PJC	876	PHE	NE	NPJZZZZ	201	Update July 02 - Wastewater O&M	2,400		
PJC	876	WST	NE	NPJZZZZ	201	WST WASTEWATER (G0000384)	18,492		
						47,508	48,049	58,500	
PJC	876	PHE	NE	NPJZZZZ	301	Vehicle	4,960	3,784	3400
PJC	876	PHE	NE	NPJZZZZ	462	PC Software	998		
PJC	876	PHE	NE	NPJZZZZ	462	Update August 01 - LIMS Software Maintenance	2,940		3200
						3,938	1,489	3,200	
PJC	789	PHE	NE	NPJZZZZ	501	ATTEND TRAINING (G0002896)	7,500		3000
PJC	876	WST	NE	NPJZZZZ	501	Update June 01 - Armstrong Bldg Maint Jan Svcs (G0000388)	9,180		10000
						16,680	8,876	13,000	
PJC	876	HST	NE	NPJZZZZ	508	Update June 01 - HST WASTEWATER (G0000360)	648		1000
PJC	876	KST	NE	NPJZZZZ	508	Update June 01 - KST WASTEWATER (G0000384)	648		

R-WS-02B

R-WS-02B

T&D

Under contract
 1(A) = 16,800 (Prod)
 Outside Services
 2(B) = 500 (Prod)
 Outside Serv (Environ)
 2(C) = 13,800 (Prod)

Environmental Dept.							Budget	Actual	
Water & Hazardous Materials Division									
2006 Non-Labor Forecast									
							Prior Year		Current Year
*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line Item	FY05	FY04	FY06
PJW	876	CNS	BE	NPJZZZZZ	201	HGA H18945 006-Keahole	150	11	150
PJW	876	PST	BE	NPJZZZZZ	201	HGA H18945 003-Puna	50	11	50
PJW	876	RST	BE	NPJZZZZZ	201	HGA H18845 002-Hill	150	48	150
PJW	876	SST	BE	NPJZZZZZ	201	HGA H18945 001-Shipman	1,100	1,079	1,100
PJW	925	HEL	BE		201		0	182	200
							1,450	1,330	1,650
PJW	877	MEL	BE	NPJZZZZZ	508	HDE H18794 003-Helco	470		
PJW	866	UHY	BE		508	Pueo Hydro General	0	2,654	0
							470	2,654	0
PJW	788	PST	BE	NPJZZZZZ	521	HGA - Conduct Training-Puna	190	10	
PJW	878	RST	BE	NPJZZZZZ	521	HGA - Hill			320
PJW	877	RST	BE	NPJZZZZZ	521	HGA H18844 002-Hill	80	95	80
PJW	788	SST	BE	NPJZZZZZ	521	HGA H18840 004-Shipman	570		
PJW	876	SST	BE	NPJZZZZZ	521	HGA - Shipman			160
PJW	877	SST	BE	NPJZZZZZ	521	HGA H18844 001-Shipman	80	252	250
PJW	878	CNS	BE		521	Keahole	0	47	160
PJW	788	HEL	BE		521	Helco	0	287	160
							920	692	1,130
PJW	876	BNS	BE	NPJZZZZZ	522	HGA H18945 005-Waimea	235		
PJW	877	BNS	BE	NPJZZZZZ	522	HGA H18844 005-Waimea	470	149	220
PJW	878	BNS	BE	NPJZZZZZ	522	HGA H18847 005-Waimea	235		220
PJW	788	CNS	BE	NPJZZZZZ	522	HGA H13741 003-Keahole	470	57	360
PJW	878	CNS	BE	NPJZZZZZ	522	HGA H18945 006-Keahole	2,550	655	1,300
PJW	876	CNS	BE	NPJZZZZZ	522	HGA H18945 006-Keahole	940	100	
PJW	877	CNS	BE	NPJZZZZZ	522	HGA H18844 006-Keahole	1,175	326	680
PJW	878	CNS	BE	NPJZZZZZ	522	HGA H18847 006-Keahole	235	183	720
PJW	788	HEL	BE	NPJZZZZZ	522	HDE H18794 001-Helco	940	1,122	1680
PJW	876	HEL	BE	NPJZZZZZ	522	HDE H18794 002-Helco	235	2,060	
PJW	878	HEL	BE	NPJZZZZZ	522	HDE H18794 004-Helco	470		880
PJW	876	PST	BE	NPJZZZZZ	522	HGA H18945 003-Puna	570	323	440
PJW	878	PST	BE	NPJZZZZZ	522	HGA H18945 003-Puna	235		720
PJW	877	PST	BE	NPJZZZZZ	522	HGA H18844 003-Puna	190		
PJW	878	PST	BE	NPJZZZZZ	522	HGA H18847 003-Puna	190		
PJW	788	RST	BE	NPJZZZZZ	522	HGA H18840 001-Hill	570	222	180
PJW	876	RST	BE	NPJZZZZZ	522	HGA H18845 002-Hill	1,520	1,763	1,180
PJW	878	RST	BE	NPJZZZZZ	522	HGA H18845 002-Hill	1,410		
PJW	877	RST	BE	NPJZZZZZ	522	HGA H18844 002-Hill	735	1,132	620
PJW	878	RST	BE	NPJZZZZZ	522	HGA H18847 002-Hill	190	440	220
PJW	876	SST	BE	NPJZZZZZ	522	HGA H18945 001-Shipman	760	10	
PJW	878	SST	BE	NPJZZZZZ	522	HGA H18945 001-Shipman	705	2,170	2340
PJW	877	SST	BE	NPJZZZZZ	522	HGA H18844 001-Shipman	1,250	82	360
PJW	878	SST	BE	NPJZZZZZ	522	HGA H18847 001-Shipman	190	201	
PJW	866	UHY	BE		522	Pueo Hydro General	0	171	0
							16,470	11,367	12,520
						TOTAL HELCO BILLABLE	19,310	18,043	15,300
PJW	876	MNS	BE	NPJZZZZZ	201	MGM M19147 005-Maialaea	100	248	260
PJW	878	NST	BE	NPJZZZZZ	201	MGK M18146 005-Kahalaui	200	563	600
PJW	877	MAU	BE		201	Maui - T & D	0	130	150
							300	981	1,000
PJW	877	MAU	BE		501	Maui - T & D	0	207	200
PJW	876	MNS	BE		501	Maialaea	0	57	50
PJW	788	MPO	BE		501	Maui Production Operation	0	46	0
PJW	866	NST	BE		501	Kahalaui	0	664	50
							0	976	300
PJW	877	MAU	BE	NPJZZZZZ	508	MDE M15885 001-Maui	6,000		

environ

Labor Class	Labor Classes (description)	2006	
E	Enabler	54.59	(1)
AIRSCI	Air/Noise Scientist	37.36	(1)
CHEMST	Chemist	31.07	(1)
WHMSCI	Water/Haz Mat Scientist	33.62	(1)

(1) 2006 Standard Labor Rates = 2003 adjusted rates * 2006 Merit wage assumption factor of 1.099.
See 2003 adjusted rate calculation on supporting tab.

Std lbr class - 150 and 155 LAB 2003 (Bert request).xls

Labor Class	2003 Total \$	2003 Total Hours	Full Year 2003 Calculated Rate	Full Year 2003 Avg OT Factor	2005 Avg OT Factor	2003 Adj Hours	2003 Adj Rate
E	1,194,436.14	24,046.00	49.67	1.08	1.08	24,046.00	49.67
AIRSCI	309,184.89	8,847.00	34.95	1.07	1.10	9,095.05	33.99
CHEMST	326,154.50	11,221.25	29.07	1.07	1.10	11,535.86	28.27
WHMSCI	359,398.90	11,427.75	31.45	1.07	1.10	11,748.15	30.59

2005 Recorded On-Cost Rates

	Recorded <u>2/1/2005</u>
Payroll Taxes	8.42%
Employee Benefits	\$ 7.88
Non-Productive Wages	\$ 3.85
Corporate Administration	\$ 2.57

Payroll Taxes
Account 184010

Recorded
2/1/2005

Cost Pool:

Nonlabor	8,429
Net Flex	(170)
	<u>8,259</u>

Cost Base:

Total Company Productive Labor	98,120
Less Police	(74)
Net Company Productive Labor	<u>98,046</u>

Rate	<u>8.42%</u>
-------------	---------------------

Employee Benefits

	Recorded 2/1/2005
<u>Cost Pool:</u>	
Labor to 926	554
Non-Productive Wages	69
Payroll Taxes	47
Energy Delivery	-
Corporate Administration	46
Stores	11
Employee Benefits	144
Nonlabor	23,694
Less Disallowed Items (see below)	(911)
	<u>23,654</u>
<u>Cost Base:</u>	
Total Company Productive Hours	3,004
Less Police Prod Hours	(3)
Net Company Productive Hours	<u>3,001</u>
Rate	<u>\$ 7.88</u>
<u>Disallowed Items:</u>	
HEIRS	51
EXEC LIFE	429
PENSION-DIRECTORS	12
PENSION-EXCESS PLANS	120
PENSION-SERP	299
	<u>911</u>

**Non-Productive Wages
Account 184030**

**Recorded
2/1/2005**

Cost Pool:

Non-Productive Wages	11,558
	<u>11,558</u>

Cost Base:

Net Company Productive Hours	3,001
Rate	<u>\$ 3.85</u>

Corporate Administration

	<u>2/1/2005</u>
<u>Cost Pool:</u>	
Labor	567
Non-Productive Wages	78
Payroll Taxes	48
Employee Benefits	160
Stores	3
Nonlabor	602
Capital Budgets Labor	124
Non-Productive Wages	15
Payroll Taxes	10
Employee Benefits	32
	<u>1,638</u>
<u>Cost Base:</u>	
Capital Labor Hours	431
Clearings to Capital	205
	<u>636</u>
Rate	<u>\$ 2.57</u>

CA-IR-330

Ref: HELCO-WP-545, page 2 and HELCO Response to CA-IR-47; PGV Capacity Sanctions.

Based upon the explanation provided in response to CA-IR-47 regarding the anticipated PGV deratings during 2006, please provide the Company's best estimate of the capacity sanctions that may be experienced in 2006 and explain whether the capacity sanction of \$232,738 shown on line 28 of WP-545 is reasonably reflective of ongoing PGV performance levels. Provide copies of all calculations and any documents associated with the response.

HELCO Response:

HELCO estimates that PGV capacity sanctions during 2006 will be approximately \$451,000. This amount includes recorded January through August 2006 capacity sanctions; estimates for September and October 2006 are based on PGV's 2006 Production Well Workover & Generation Schedule Rev. 3, dated September 8, 2006 (refer to CA-IR-330 Attachment 1) and recorded SCADA information; and November and December 2006 estimates are based on average recorded sanctions for January through June 2006 period. Although PGV states it will be able to provide 30 MW, HELCO predicts some sanctions may occur in November and December 2006. Historically, PGV incurred some capacity sanctions during periods when its geothermal resource levels recovered and it was able to produce 30 MW. Therefore, the monthly sanction average for its January to June period, prior to its well problems, is used for November and December 2006 estimates. Calculations are provided in CA-IR-330 Attachment 2.

The 2006 test year capacity sanction of \$232,738 as shown on HELCO-WP-545 is a reasonable estimate based on information provided by PGV that it will be able to provide 30 mw of generating capacity. According to its latest schedule, PGV estimates that it will produce at its full 30 MW capacity level by October 23, 2006. The test year capacity sanction is not reflective of PGV's performance during periods when its geothermal resource level does not allow PGV to meet the 30 MW capacity level.

Puna Geothermal Venture
2006 Production Well Workover & Generation Schedule

Rev. 3 September 8, 2006

Current generation availability.....		22 MW's
20 Aug	KS-6 out of service.....	16 MW's
8 Sep	KS-6 Work over.....	21 MW's
10 Sep	KS-5 out of service.....	14 MW's
18 Sep	KS-6 back in service.....	22 MW's
4 Oct	KS-5 minimum flow	24 MW's
23 Oct	KS-5 back in service.....	30 MW's
30 Oct through 5 Nov semi-annual Outage.....		0 MW's
6 Nov – 31 Dec		30 MW's available
•	15 Aug - 20 Aug.....	22 MW's
•	20 Aug - 8 Sep.....	16 MW's
•	8 Sep - 8 Sep... ..	21 MW's
•	10 Sep - 17 Sep.....	14 MW's
•	18 Sep - 3 Oct.....	22 MW's
•	4 Oct - 10 Oct.....	24 MW's
•	23 Oct	30 MW's available
•	30 Oct – 5 Nov.....	0 MW's
•	6 Nov – 31 Dec.....	30 MW's

Hawaii Electric Light Company, Inc.
Estimated PGV Capacity Sanction for 2006

Jan-2006 Recorded	\$	22,533.35	
Feb-2006 Recorded	\$	20,499.00	
Mar-2006 Recorded	\$	6,985.04	
Apr-2006 Recorded	\$	10,959.91	
May-2006 Recorded	\$	9,518.50	
Jun-2006 Recorded	\$	8,079.15	
Jul-2006 Recorded	\$	71,807.14	
Aug-2006 Recorded	\$	105,960.94	
Sep-2006 Estimate (see page 2)	\$	121,899.78	
Oct-2006 Estimate (see page 3)	\$	46,244.80	
Nov-2006 Estimate (Jan-Jun 2006 recorded average)	\$	13,095.83	
Dec-2006 Estimate (Jan-Jun 2006 recorded average)	\$	13,095.83	
<hr/>			
Total	\$	450,679.26	~ round \$451,000

Hawaii Electric Light Company, Inc.
PGV Estimated Capacity Sanction - Sep 2006

	possible hrs	Deficient Hrs	Rate	Total
25 mw on-peak	10,500,000	2,270,200	0.0339	\$ 76,959.78
25-30 mw on-peak	2,100,000	2,100,000	0.0214	\$ 44,940.00
Estim Sep 2006 Cap Sanctions				\$ 121,899.78

\$ 375,395.83 monthly capacity
\$ (121,899.78) less capacity sanction
\$ 253,496.05 adjusted monthly capacity

	Estimated On-Peak Hours	possible hrs up to 25mw	deficiency below 25 mw	possible hrs 25-30 mw	deficiency between 25-30
Sep 1-14: SCADA					
Sep 15-17: 14mw					
Sep 18-30: 22mw					
9/1/2006	270,140	350,000	(79,860)	70,000	(70,000)
9/2/2006	271,580	350,000	(78,420)	70,000	(70,000)
9/3/2006	270,380	350,000	(79,620)	70,000	(70,000)
9/4/2006	269,080	350,000	(80,920)	70,000	(70,000)
9/5/2006	270,360	350,000	(79,640)	70,000	(70,000)
9/6/2006	274,920	350,000	(75,080)	70,000	(70,000)
9/7/2006	281,660	350,000	(68,340)	70,000	(70,000)
9/8/2006	291,680	350,000	(58,320)	70,000	(70,000)
9/9/2006	291,040	350,000	(58,960)	70,000	(70,000)
9/10/2006	235,600	350,000	(114,400)	70,000	(70,000)
9/11/2006	226,680	350,000	(123,320)	70,000	(70,000)
9/12/2006	225,780	350,000	(124,220)	70,000	(70,000)
9/13/2006	228,520	350,000	(121,480)	70,000	(70,000)
9/14/2006	230,380	350,000	(119,620)	70,000	(70,000)
9/15/2006	196,000	350,000	(154,000)	70,000	(70,000)
9/16/2006	196,000	350,000	(154,000)	70,000	(70,000)
9/17/2006	196,000	350,000	(154,000)	70,000	(70,000)
9/18/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/19/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/20/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/21/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/22/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/23/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/24/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/25/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/26/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/27/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/28/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/29/2006	308,000	350,000	(42,000)	70,000	(70,000)
9/30/2006	308,000	350,000	(42,000)	70,000	(70,000)
Total	8,229,800	10,500,000	(2,270,200)	2,100,000	(2,100,000)

Hawaii Electric Light Company, Inc.
PGV Estimated Capacity Sanction - Oct 2006

	possible hrs	Deficient Hrs	Rate	Total
25 mw on-peak	10,850,000	392,000	0.0339	\$ 13,288.80
25-30 mw on-peak	2,170,000	1,540,000	0.0214	\$ 32,956.00
Estim Oct 2006 Cap Sanctions				\$ 46,244.80

\$ 375,395.83 monthly capacity
\$ (46,244.80) less capacity sanction
\$ 329,151.03 adjusted monthly capacity

	Estimated On-Peak Hours	possible hrs up to 25mw	deficiency below 25 mw	possible hrs 25-30 mw	deficiency between 25-30
Oct 1-3: 22mw					
Oct 4-22: 24mw					
Oct 23-30: 30mw					
10/1/2006	308,000	350,000	(42,000)	70,000	(70,000)
10/2/2006	308,000	350,000	(42,000)	70,000	(70,000)
10/3/2006	308,000	350,000	(42,000)	70,000	(70,000)
10/4/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/5/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/6/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/7/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/8/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/9/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/10/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/11/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/12/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/13/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/14/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/15/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/16/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/17/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/18/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/19/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/20/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/21/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/22/2006	336,000	350,000	(14,000)	70,000	(70,000)
10/23/2006	420,000	350,000	-	70,000	-
10/24/2006	420,000	350,000	-	70,000	-
10/25/2006	420,000	350,000	-	70,000	-
10/26/2006	420,000	350,000	-	70,000	-
10/27/2006	420,000	350,000	-	70,000	-
10/28/2006	420,000	350,000	-	70,000	-
10/29/2006	420,000	350,000	-	70,000	-
10/30/2006	420,000	350,000	-	70,000	-
10/31/2006	420,000	350,000	-	70,000	-
Total	11,088,000	10,850,000	(392,000)	2,170,000	(1,540,000)

CA-IR-331

Ref: Response to CA-IR-2, HELCO T-5, Attachment 1C, page 2 of 3; CEMS Services.

Please provide the following information regarding the projected Continuous Emissions Monitoring Services for HELCO resulting in charges of \$123,090:

- a. Copy of the contract with Atmos and/or other current vendors.
- b. Monthly billed amounts for CEMS by vendor for all months of 2003, 2004, 2005 and 2006 to-date.
- c. Explanations for any significant fluctuations in amounts in response to part (b) of this information request.
- d. Describe the basis for HELCO's test year expense estimation and any needed revisions to same.

HELCO Response:

- a. The only current vendor is Atmos. Service is provided on a month-to-month basis. There is no contract in force. HELCO/HECO/MECO is beginning the bidding process for this type of work, from which, a contract will then be executed.
- b. See Attachment 1 for monthly billed amounts for CEMS for all months of 2003, 2004, 2005 and August 2006 year-to-date. Atmos was the sole vendor in these years.
- c. Attachment 1 shows significant fluctuations in amounts in response to subpart b. in years 2004, 2005 and 2006. The main reason for this is due to the running of Shipman Plant in 2006, and commissioning of CT-4 and CT-5 in 2004. In addition to the monthly maintenance of the CEMS systems, annual performance source testing and Relative Accuracy Test Audits (RATA) are performed. In December 2005 and January 2006, annual performance source testing was done on CT-4 and CT-5.
- d. The basis for HELCO's test year expense estimate is shown on HELCO T-5, Attachment 1C, page 1 of CA-IR-2. The forecast was based on a 2-year average (actual 2003 and

adjusted 2004), with the exception of 2004 amounts being used for Shipman, CT-4 and CT-5. An adjustment is needed to increase the estimate to approximately \$379,300 for fluctuations explained in subpart c. This is made up of \$348,500 in actuals spent through September 2006 plus \$30,800 of remaining months estimate. Services similar to what was performed last year are expected to continue. Refer to CA-IR-447 for more information.

Hawaii Electric Light Company Inc.

2006 TEST YEAR

2003 - 2006 Year-to-Date Monthly Billed Amounts for CEMS (thru 09/30/2006)

Source: Pillar Actuals

Month-Yr	Jan 03 Actual	Feb 03 Actual	Mar 03 Actual	Apr 03 Actual	May 03 Actual	Jun 03 Actual	Jul 03 Actual	Aug 03 Actual	Sep 03 Actual	Oct 03 Actual	Nov 03 Actual	Dec 03 Actual	FY03 Actual
Amount	\$ (11,206)	\$ 6,896	\$ 8,525	\$ 7,940	\$ 8,314	\$ 6,765	\$ 11,217	\$ 46,547	\$ 5,487	\$ 6,485	\$ 8,729	\$ 6,671	\$ 112,369
Month-Yr	Jan 04 Actual	Feb 04 Actual	Mar 04 Actual	Apr 04 Actual	May 04 Actual	Jun 04 Actual	Jul 04 Actual	Aug 04 Actual	Sep 04 Actual	Oct 04 Actual	Nov 04 Actual	Dec 04 Actual	FY04 Actual
Amount	\$ 17,963	\$ 5,190	\$ 5,517	\$ 4,480	\$ 5,629	\$ 8,003	\$ 4,465	\$ 3,946	\$ 6,484	\$ 4,681	\$ 12,403	\$ 10,242	\$ 89,005
Month-Yr	Jan 05 Actual	Feb 05 Actual	Mar 05 Actual	Apr 05 Actual	May 05 Actual	Jun 05 Actual	Jul 05 Actual	Aug 05 Actual	Sep 05 Actual	Oct 05 Actual	Nov 05 Actual	Dec 05 Actual	FY05 Actual
Amount	\$ 8,470	\$ 8,491	\$ 8,857	\$ 17,112	\$ 15,199	\$ 8,634	\$ 46,358	\$ 86,000	\$ 12,081	\$ 11,124	\$ 2,906	\$ 8,113	\$ 233,346
Month-Yr	Jan 06 Actual	Feb 06 Actual	Mar 06 Actual	Apr 06 Actual	May 06 Actual	Jun 06 Actual	Jul 06 Actual	Aug 06 Actual	Sep 06 Actual				FY06 Actual
Amount	\$ -	\$ 176,718	\$ 11,494	\$ 14,077	\$ 11,993	\$ 59,967	\$ -	\$ 44,782	\$ 29,455				\$ 348,487

CA-IR-332

Ref: Response to CA-IR-2, HELCO T-5, Attachment 2A, page 22; Boiler Chemicals.

Please provide the following information regarding the projected Boiler Chemicals consumption and expense at steam units:

- a. Provide updated "Annual Historical Costs" data for all units for 2005 and 2006 to-date.
- b. Provide the comparable net MWH generation data based upon HELCO's test year sales and dispatch simulation.

HELCO Response:

- a. See Attachment 1 for updated "Annual Historical Costs" data for all units for 2005 and 2006 to-date through July 31, 2006.
- b. Attachment 1, page 1 of CA-IR-54 provides the comparable net MWH generation data based upon HELCO's test year sales and dispatch simulation. (Note: When comparing the historical MWH reported in CA-IR-332 Attachment 1 against what was shown in Attachment 1 of HELCO CA-IR-54, the MWH shown in CA-IR-332 Attachment 1 represent "Net to the System (MWH)" and CA-IR-54 amounts represent "Gross (MWH)" less "Station Power Consumed – Online.")

CA-IR-332
DOCKET NO. 05-0315
ATTACHMENT 1

2006 TEST YEAR

Boiler Chemicals Consumption - Steam

Annual Historical Costs		1999	2000	2001	2002	2003	2004	2005	(Thru 7/31/06) 2006
Shipman	cost	\$31,169	\$25,331	\$6,621	\$ 33,714	\$ 42,254	\$ 22,408	\$ 24,034	\$ 28,078
	net mwh	46,306	38,045	1,039	16,539	7,696	6,571	8,108	21,152
	cost/mwh	0.6731	0.6658	6.3744	2.0385	5.4904	3.4101	2.9642	1.3274
Hill	cost	\$27,962	\$31,321	\$48,854	\$ 68,809	\$ 47,633	\$ 71,673	\$ 101,503	\$ 58,714
	net mwh	257,501	240,929	225,039	212,548	201,408	189,509	230,066	127,679
	cost/mwh	0.1086	0.1300	0.2171	0.3237	0.2365	0.3782	0.4412	0.4599
Puna	cost	\$56,151	\$73,462	\$65,697	\$ 78,089	\$ 57,637	\$ 67,724	\$ 52,897	\$ 27,807
	net mwh	95,037	90,754	78,783	71,799	76,757	70,623	88,441	55,255
	cost/mwh	0.5908	0.8095	0.8339	1.0876	0.7509	0.9590	0.5981	0.5032
Total Steam cost		\$115,282	\$130,114	\$121,172	\$ 180,612	\$ 147,524	\$ 161,805	\$ 178,434	\$ 114,599
Source FSM905R & 1652 Work Order Detail (DARS)									

CA-IR-333

Ref: Response to CA-IR-2, HELCO T-5, Attachment 2A, page 23; Demineralizer Chemicals.

Please provide the following information regarding the projected Demineralizer Chemicals consumption at CTs:

- a. Provide updated "Annual Historical Costs" data for all units for 2005 and 2006 to-date.
- b. Provide the comparable net MWH generation data based upon HELCO's test year sales and dispatch simulation.

HELCO Response:

- a. See Attachment 1 for updated "Annual Historical Costs" data for all units for 2005 and 2006 to-date through July 31, 2006.
- b. Attachment 1, page 1 of CA-IR-54 provides the comparable net MWH generation data based upon HELCO's test year sales and dispatch simulation. (Note: When comparing the historical MWH reported here against what was shown in Attachment 1 of HELCO CA-IR-54, the MWH shown in Attachment 1 represent "Net to the System (MWH)" and CA-IR-54 amounts represent "Gross (MWH)" less "Station Power Consumed – Online.")

Hawaii Electric Light Company Inc.

CA-IR-333
DOCKET NO.05-0315
ATTACHMENT 1

2006 TEST YEAR

Demineralized Chemicals Consumption - CTs

Annual Historical Costs

Puna - CT3								(Thru 7/31/06)
	1999	2000	2001	2002	2003	2004	2005	2006
cost	\$31,329	\$20,998	\$18,696	\$36,374	\$19,130	\$8,353	\$8,630	\$8,839
net MWH	113,037	112,020	25,861	81,677	45,241	30,853	26,926	10,863
cost/MWH	0.277	0.187	0.723	0.445	0.423	0.271	0.321	0.814

Keahole - CT2								(Thru 7/31/06)
	1999	2000	2001	2002	2003	2004	2005	2006
cost	\$151,183	\$37,657	\$22,364	\$7,122	\$3,487	\$12,493	\$4,765	\$277
net MWH	46,680	67,281	33,008	45,728	50,217	31,518	13,839	6,924
cost/MWH	3.239	0.560	0.678	0.156	0.069	0.396	0.344	0.040

Keahole - CT4			(Thru 7/31/06)
	2004	2005	2006
cost	\$0	\$20,687	\$2,911
net MWH	37,857	76,422	41,882
cost/MWH	0.000	0.271	0.070

Keahole - CT5			(Thru 7/31/06)
	2004	2005	2006
cost	\$0	\$19,763	\$2,911
net MWH	28,309	64,552	29,439
cost/MWH	0.000	0.306	0.099

CA-IR-334

Ref: Response to CA-IR-2, HELCO T-5, Attachment 2A, page 24; Lube Oil – Diesels.

Please provide the following information regarding the projected Lube Oil consumption at diesels:

- a. Provide updated “Annual Historical Costs” data for all units for 2005 and 2006 to-date.
- b. Explain the apparent inconsistency in developing a gallons per run hour statistic at the bottom of the page that is then multiplied by Net MWH, rather than run hours at the top of the page to develop test year estimated costs.
- c. Provide the comparable net MWH generation data based upon HELCO’s test year sales and dispatch simulation.
- d. Provide the comparable Diesel “Run hours” (as used in the bottom half of the page 24 spreadsheet) based upon HELCO’s test year sales and dispatch simulation.
- e. Explain whether HELCO believes any adjustment to the Company’s test year forecast for lube oil is appropriate, based upon the responses to parts (a) through (d) of this information request.

HELCO Response:

- a. See Attachment 1 for updated “Annual Historical Costs” data for all units for 2005 and 2006 to-date through October 31, 2006. The historical run hours previously reported on CA-IR-2, HELCO T-5, Attachment 2A, page 24 inadvertently contained errors and have been corrected on Attachment 1 of CA-IR-334.
- b. Lube oil should be calculated as per run hour and not Net MWH.
- c. Attachment 1 of CA-IR-54 provides the comparable net MWH generation data based upon HELCO’s test year sales and dispatch simulation.
- d. Attachment 1 of CA-IR-54 provides the comparable Diesel “Run hours” based upon HELCO’s test year sales and dispatch simulation.
- e. Based upon the responses to parts (a) through (d), yes, the run hours from the test year

dispatch simulation (refer to Attachment 1, page 1 of 8, CA-IR-54) would better represent the diesel run hours. As shown on Attachment 2 to this response, after correcting the historical run hours which revised the estimated gal/hour amounts for the Kanoelehua, Keahole and Waimea diesel units and applying these revised gal/hour amounts to applicable production simulation run hours, the correct lube oil expense for the 2006 test year is \$40,540. HELCO proposes a (\$21,980) adjustment reducing the originally forecasted lube oil – diesel expense of \$62,520 to \$40,540 for the test year.

Lube Oil - Diesels

Annual Historical Cost

(Thru 10/31/06)

		2001	2002	2003	2004	2005	2006
Kanoelehua	Gallons	3,850	4,237	2,706	1,005	1,505	500
	Run hours	1,475	2,396	1,451	523	702	225
	Gals/Hr	2.61	1.77	1.86	1.92	2.14	2.23
	Cost	\$17,739	\$19,781	\$12,874	\$5,515	\$9,214	\$3,467
	Cost/Gal	\$ 4.61	\$ 4.67	\$ 4.76	\$ 5.49	\$ 6.12	\$ 6.93
Keahole	Gallons	10,789	9,626	8,470	5,005	1,540	770
	Run hours	6,068	5,530	5,715	2,578	1,162	728
	Gals/Hr	1.78	1.74	1.48	1.94	1.33	1.06
	Cost	\$49,858	\$45,017	\$41,202	\$25,405	\$8,149	\$4,980
	Cost/Gal	\$ 4.62	\$ 4.68	\$ 4.86	\$ 5.08	\$ 5.29	\$ 6.47
Waimea	Gallons	1,540	7,707	6,029	4,231	6,551	1,540
	Run hours	1,385	3,913	3,522	1,863	2,376	1,053
	Gals/Hr	1.11	1.97	1.71	2.27	2.76	1.46
	Cost	\$7,803	\$33,212	\$30,968	\$21,829	\$23,780	\$11,124
	Cost/Gal	\$ 5.07	\$ 4.31	\$ 5.14	\$ 5.16	\$ 3.63	\$ 7.22

Note: The following historical run hours previously reported on CA-IR-2, HELCO T-5, Attachment 2A, page 24 were corrected.

Kanoelehua CY 2003: Previously reported as 1,536. Run hours should be 1,451 (CA-IR-54, Attachment 1, page 5).

Kanoelehua CY 2004: Erroneously reported Net MWHs of 1,053. Run hours should be 523 (CA-IR-54, Attachment 1, page 4).

Keahole CY 2004: Erroneously reported Net MWHs of 5,269. Run hours should be 2,578 (CA-IR-54, Attachment 1, page 4).

Waimea CY 2004 : Erroneously reported Net MWHs of 3,949. Run hours should be 1,863 (CA-IR-54, Attachment 1, page 4).

HAWAII ELECTRIC LIGHT COMPANY
PRODUCTION DEPARTMENT
Lube Oil - Diesels
Operating Forecast 2006

CA-IR-334
DOCKET 05-0315
ATTACHMENT 2

CA-IR-54
Attach 1

Lube Oil	Naruc	Code Block	Prod Sim Run Hours (a)	Estim Gal / Hr (b)	Estim Gals Consumed (c) (a x b)	Cost/Gal (d)	Adjusted Cost (c x d)	Originally Forecast	Difference
2006									
Kanoelehua	548260	HGH 244 ANS NE NHGZZZZZ 201	458	1.85	849	\$ 4.58	\$ 3,890	\$ 16,950	\$ (13,060)
Keahole	548280	HGK 244 CNS NE NHGZZZZZ 201	4,556	1.63	7,412	\$ 4.65	\$ 34,500	\$ 21,390	\$ 13,110
Waimea	548250	HGK 244 BNS NE NHGZZZZZ 201	254	1.81	460	\$ 4.66	\$ 2,150	\$ 24,180	\$ (22,030)
			<u>5,268</u>		<u>8,722</u>		<u>\$ 40,540</u>	<u>\$ 62,520</u>	<u>\$ (21,980)</u>

Annual Historical Cost

		2000	2001	2002	2003	2004	Total	
Kanoelehua	Gallons	14,651	3,850	4,237	2,706	1,005	26,449	WO:PR000009
	Run hours	8,416	1,475	2,396	1,451	523	14,261	Gen Rept
	Gals/Hr	1.74	2.61	1.77	1.86	1.92	1.85	(b)
	Cost	\$65,142	\$17,739	\$19,781	\$12,874	\$5,515	\$121,051	WO:PR000009
	Cost/Gal	\$ 4.45	\$ 4.61	\$ 4.67	\$ 4.76	\$ 5.49	\$ 4.58	(d)
Keahole	Gallons	33,197	10,789	9,626	8,470	5,005	67,087	WO:PR000010
	Run hours	21,345	6,068	5,530	5,715	2,578	41,236	Gen Rept
	Gals/Hr	1.56	1.78	1.74	1.48	1.94	1.63	(b)
	Cost	\$150,741	\$49,858	\$45,017	\$41,202	\$25,405	\$312,224	WO:PR000010
	Cost/Gal	\$ 4.54	\$ 4.62	\$ 4.68	\$ 4.86	\$ 5.08	\$ 4.65	(d)
Waimea	Gallons	11,795	1,540	7,707	6,029	4,231	31,302	WO:PR000011
	Run hours	6,584	1,385	3,913	3,522	1,863	17,267	Gen Rept
	Gals/Hr	1.79	1.11	1.97	1.71	2.27	1.81	(b)
	Cost	\$52,201	\$7,803	\$33,212	\$30,968	\$21,829	\$146,013	WO:PR000011
	Cost/Gal	\$ 4.43	\$ 5.07	\$ 4.31	\$ 5.14	\$ 5.16	\$ 4.66	(d)

Note: The following historical run hours previously reported on CA-IR-2, HELCO T-5, Attachment 2A, page 24 were corrected.

Waimea CY 2000 : Previously reported as 6,702. Run hours should be 6,584 (CA-IR-54, Attachment 1, page 8).
Kanoelehua CY 2003: Previously reported as 1,536. Run hours should be 1,451 (CA-IR-54, Attachment 1, page 5).
Kanoelehua CY 2004: Erroneously reported Net MWHs of 1,053. Run hours should be 523 (CA-IR-54, Attachment 1, page 4).
Keahole CY 2004: Erroneously reported Net MWHs of 5,269. Run hours should be 2,578 (CA-IR-54, Attachment 1, page 4).
Waimea CY 2004 : Erroneously reported Net MWHs of 3,949. Run hours should be 1,863 (CA-IR-54, Attachment 1, page 4).

As a result of the corrections, the estimated average gals/hours used during 2000 to 2004 and used for the TY 2006 budget were revised:

Kanoelehua: Previously reported as \$1.78 gal/hr. Revised to \$1.85 gal/hr.

Keahole: Previously reported as \$1.53 gal/hr. Revised to \$1.63 gal/hr.

Waimea: Previously reported as \$1.61 gal/hr. Revised to \$1.81 gal/hr.

CA-IR-335

Ref: Response to CA-IR-2, HELCO T-5, Attachment 2A; Lube Oil, Boiler Chemicals, Demineralizer Chemicals.

For the following rows in the spreadsheet file supporting Materials cost estimates, there is either no historical expense data for years FY99 through FY04 or the expense data shown does not appear to correlate to the "Annual Historical Costs" data at the bottom of pages 22, 23 and 24. Please explain this discrepancy and provide information necessary to compare historical actual expense amounts to the projected test year costs for each spreadsheet row:

a.	HGH	242	RST	Blr Chem	\$17,090.
b.	HGH	244	ANS	Lube Oil	\$16,950.
c.	HGH	248	RST	Blr Chem	\$68,330.
d.	HGK	244	BNS	Lube Oil	\$21,390.
e.	HGK	244	CNS	Lube Oil	\$24,180.
f.	HGK	248	CO2	Demin Chem	\$ 1,210.
g.	HGK	248	CO4	Demin Chem	\$16,920.
h.	HGK	248	CO5	Demin Chem	\$ 8,260.
i.	HGP	248	PO1	Blr Chem	\$66,230.
j.	HGP	248	PO1	Blr Chem	\$66,320 (duplicated?).
k.	HGP	248	PO3	Demin Chem	\$ 8,630.

HELCO Response:

"Annual Historical Costs" data at the bottom of CA-IR-2, Attachment 2A, pages 22, 23 and 24 are derived from standing workorders that track the specific associated costs. The historical expense data for years FY99 through FY04 which are listed in CA-IR-2, Attachment 2A are sorted by RA and activity code. Workorder charges, project charges and direct charges combine to make up these dollar amounts. Thus, the historical actual expense amounts related to the separate boiler chemicals, demineralizer costs and lube oil (tracked by workorder) are shown at the bottom of T-5, CA-IR-2, Attachment 2A, pages 22, 23 and 24. Those actual expense amounts are included in expense amounts listed in T-5, CA-IR-2, Attachment 2A, pages 9 through 21.

a. Items a through h, j and k are considered an overstatement of materials cost and will be

reversed as an adjustment. See adjustment in CA-IR-447 (T-6), Attachment 1 which supercedes the adjustment proposed in HELCO's response to CA-IR-334.

- b. See above.
- c. See above.
- d. See above.
- e. See above.
- f. See above.
- g. See above.
- h. See above.
- i. See HELCO T-5, CA-IR-2, Attachment 2A, page 18.
- j. See above.
- k. See above.

CA-IR-336

Ref: Response to CA-IR-2, HELCO T-5, Attachment 2A; Miscellaneous Materials.

For each of the following listed forecast line item amounts, please provide the comparable actual expenses for calendar 2005 and year-to-date 2006, indicating why/whether the Company's forecasted test year amount is reasonable in light of the actual comparable expenditure levels and any other relevant information:

a.	HGK 244	CNS Op & Mon Plt Eq	\$139,950
b.	HGX 265	PT2 Maint Stn Common Struct & Sys-Cor	\$107,380
c.	HGX 266	BNS Maint St Common Misc Equip-Pr	\$ 96,850
d.	HGX 276	ANS Maint Int Combust Eng & Rel Eq-Pre	\$201,920

HELCO Response:

For the above listed forecast items, which are a few of the production maintenance nonproject material expenses (at the location/activity level) included in Production Maintenance Non-labor expense, the comparable actual expenses for calendar 2005 and year-to-date 2006 are shown below.

		<u>2005 Actual</u>	<u>2006 Actual</u> <u>Thru</u> <u>10/31/06</u>	<u>2006 Fcst</u>
a.	HGK 244 CNS Op & Mon Plt Eq	\$10,777	\$5,084	\$139,950
b.	HGX 265 PT2 Maint Stn Common Struct & Sys-Cor	\$55,592	\$31,313	\$107,380
c.	HGX 266 BNS Maint St Common Misc Equip-Pr	\$0	\$4,186	\$ 96,850
d.	HGX 276 ANS Maint Int Combust Eng & Rel Eq-Pre	\$(193,644)	\$69	\$201,920

The \$193,644 negative amounts shown in row d, listed under "2005 Actual" is related to the Kanoelehua 4 KV Switchgear project. The project was completed in 2004 as a capital project, and was incorrectly reclassified to O&M in December 2004. This reversal was made in January 2005 to correctly move the costs back to capital. On costs are included in the actual amounts.

The Company's forecasted test year amounts are reasonable as discussed in CA-IR-77. The four items picked out of the nine pages represent a) Keahole combustion turbine and diesel ("CT&D") maintenance operating and monitoring plant equipment at Keahole power plant (HGK 244 CNS); b) Kanoelehua CT&D maintenance performing corrective work to maintain station common structures and systems of the Puna water treatment facility (HGX 265 PT2); c) Kanoelehua CT&D maintenance performing preventive work to maintain station common miscellaneous equipment in Waimea (HGX 266 BNS); and d) Kanoelehua CT&D maintenance performing predictive work to maintain internal combustion engine, generator and related equipment at the Kanoelehua station (HGX 276 ANS). The budget amounts for these items at the location and activity level were obtained by averaging amounts at the location and activity level from 2001-2004, and escalated by 4.24%. As discussed in CA-IR-66, Production maintenance work is sometimes unpredictable on a location and activity basis, but on a total responsibility area basis, the actual dollars budgeted are reasonable compared to what was previously spent.

Non-project materials forecasting is done at a high level, since not much detail is known at the time. In contrast to the recorded amounts for the above four code blocks, the following listing shows a sample of actual material costs for 2006 for which there were zero dollars originally budgeted. These are all for HGX Kanoelehua for locations D24 – Diesel 24, P03 – Puna CT-3, ANS – Kanoelehua non-steam, A01 – Kanoelehua CT-1, A15 – Diesel 15, D25 – Diesel 25, and D27 – Diesel 27.

	<u>RA</u>	<u>Act</u>	<u>Loc</u>	<u>Actual Thru 10/31 /06</u>
a.	HGX 266		D24 Maint St Common Misc Equip - Preventative	\$2,407
b.	HGX 266		P03 Maint Stn Common Misc Equip - Preventative	\$47,290
c.	HGX 267		ANS Maint Int Combust Eng & Rel Eq - Predictive	\$3,697
d.	HGX 268		ANS Maint Int Combust Eng & Rel Eq - Corrective	\$5,808
e.	HGX 268		P03 Maint Int Combust Eng & Rel Eq – Corrective	\$32,629

f.	HGX 271	A01 Maintain Fuel Feed System – Corrective	\$227,455
g.	HGX 271	A15 Maintain Fuel Feed System – Corrective	\$2,672
h.	HGX 271	D24 Maintain Fuel Feed System – Corrective	\$3,490
i.	HGX 271	D25 Maintain Fuel Feed System - Corrective	\$2,199
j.	HGX 271	D27 Maintain Fuel Feed System - Corrective	\$2,468

The total dollars budgeted for the non-project materials expense element ("EE") coded 201 for the department are reasonable compared to what was previously spent. Actuals through 10/31/06 that compare to the \$2,612,560 shown on page 8 of (HELCO T-5) CA-IR-2, Attachment 2A are summarized below:

HGA Admin-G	\$ 1,416
HGC Keahole Op	34,709
HGH Hill Opr-G	236,191
HGK Keah Maint	247,517
HGM Steam&Hydr	358,068
HGP Puna Oper	210,479
HGT Technical	9,471
HGW Waiakea Op	71,778
HGX CT&Diesel	476,393
	<u>\$1,646,023</u>

CA-IR-337

Ref: Response to CA-IR-2, HELCO T-5, Attachment 2D; page 31; Training.

Please provide the following information regarding the projected Production Department training (other than safety training) expense of \$214,200 for the test period:

- a. Provide comparable actual Production Department training expenses for each year 1999 through 2005.
- b. Explain the Company's training philosophy and criteria employed to allocate resources to training, applying such explanation to the information provided in response to part (a) above to describe training expense fluctuations from year to year.
- c. Provide actual year-to-date 2006 training expenses incurred for the Production Department, by month and "Loc" code.
- d. Describe why/whether HELCO considers its proposed test year training expense to be normal and representative of ongoing expense levels.
- e. State whether HELCO intends to actually spend \$214,200 or some other amount on training in calendar 2006.
- f. Provide copies of contracts signed or other indicia of HELCO commitments to incur training expense at the projected levels, when added to the amounts in the response to part (c) of this information request.

HELCO Response:

- a. CA-IR-2, HELCO T-5, Attachment 2D, page 31 shows anticipated non-labor dollars to be spent on training. HELCO-521 illustrates training labor dollars for 2000 through 2005 actual and 2006 forecast. There is no report prepared by year that shows the actual training non-labor expense by description. The Production Operations and Maintenance Divisions conduct similar training programs from year-to-year. The Operations Division non-labor training for merit staff in 2006 included: supervisory and leadership skills for supervisory staff, outside contractors to provide specialist training required by the Federal Department of Transportation ("DOT") for pipeline operations and environmental compliance, technical training pertaining to power plant operations and related technology, and technical training

pertaining to power system operation and related technology. The Operations Division training for bargaining unit personnel primarily involved contractor or vendor training on operation skills including boiler chemistry management, use of new technology and equipment at the plants, and for outside specialist personnel to provide on-shift and off-shift training required by the DOT for pipeline operations and environmental compliance. The Maintenance Division holds supervisory, technical and non-technical training similar to that listed on CA-IR-2, HELCO T-5, Attachment 2D, page 31. See Attachment 1 for comparable actual Production Department training expenses for each year 2000 through 2005. Attachment 1 shows costs for all non-labor expense elements, and all activity codes. There is no report available with 1999 information.

- b. The Company's training philosophy is that training is recognized as a means to develop personnel skills and increase the value of personnel. Training opportunities are assessed individually for pertinence, subject matter, whether mandated by law, rule, or process, audience to be addressed, cost, location and benefit received both by the Company and employees. The Operations Division provides training for supervisory staff as a means to develop managerial and leadership skills. The shift supervisors are typically promoted from within the Operations Division bargaining unit, due to their experience and knowledge of power plant operations and the bargaining unit contract. This training is necessary for these individuals to succeed in their role as front line supervisors. Training in 2005 and 2006 included leadership training and development, supervisory skills, crisis management skills, and Incident Command System training ("ICS"). The Operations Division also provides training to both Bargaining Unit ("BU") and supervisory staff required by the DOT for compliance with regulations for pipeline operators which requires specialized training skills,

specified hours of training for Hazardous Waste Operations and Emergency Response (HAZWOPER) and ICS operations. The Production Department, with support from other Company departments, drills annually with a 'table-top' training exercise to develop the ICS response that would be employed for a major fuel oil spill. This is a major event, involving over 60 HELCO personnel, members of the Coast Guard as Federal oversight in the event that the oil spill involves the 'navigable waters of the United States', members of the Harbors Division, Clean Island Council, state and local civil authorities. The Operations Division understands that operators must be trained to correctly operate and monitor new equipment and control systems installed in the power plants and Operations Control Center, and provides this training as new equipment is installed. The Operations Division believes in continuous improvement, by keeping its personnel aware of industry developments in operational areas as well as supervisory skills. For example, in 2005, training included computer courses on the new operating system for the SCADA/EMS for those in charge of maintenance and operation of the SCADA system, and training on the new SCADA/EMS software, and training on new control systems installed at CT-3, CT-4, and CT-5. In 2006 operational/technical training included: integration of renewable energy into the power systems, AGC unit tuning, recommendations for selecting turbine lube-oils, managing boiler chemistry, and evaluating available control systems technologies and systems (including the Online Watch Vibration System).

- c. There is no report available that provides actual year-to-date 2006 training expenses incurred for the Production Department, by month and "Loc" code. What is available is Attachment 1 which shows actual 8/31/2006 year-to-date training expenses incurred for the Production Department, by operations versus maintenance, responsibility area "RA," and

NARUC code. The NARUC code is by location. Attachment 1 shows costs for all non-labor expense elements, and all activity codes.

- d. HELCO considers its proposed test year training expense to be normal and representative of ongoing expense levels based on both actual historical costs incurred and, as Attachment 1 illustrates, the 8/31/2006 year-to-date actual training expense is \$250,756 (or \$36,556 over the budgeted \$214,200). This is attributable to new hires at Shipman, Puna and Keahole whom have required training to learn basic boiler operator skills, vendor provided training on new technology added to power plants for both maintenance and operations personnel, triennial mandatory classes for licensed electricians to maintain licensure status, and application specific seminars, such as for batteries, control valves, specialized test equipment, and visual emissions certifications, predictive and preventative maintenance.
- e. Yes, as discussed above, as of 8/31/2006, HELCO has already actually spent over \$214,200 on training.
- f. Not applicable. There are none.

Hawaii Electric Light Company Inc.

2006 TEST YEAR

Training Expense - Non-Labor

	RA	NARUC	acct desc	Sum of 2000rec	Sum of 2001rec	Sum of 2002rec	Sum of 2003rec	Sum of 2004rec	Sum of 2005rec	Sum of 2006YTD
Operations	HAC	506230	MISC STEAM POWER EXP-PUNA	-	-	-	76	-	-	-
		506230 Total		-	-	-	76	-	-	-
	HAC Total			-	-	-	76	-	-	-
	HAM	506220	MISC STEAM POWER EXP-HILL	-	-	-	67	-	-	-
		506220 Total		-	-	-	67	-	-	-
	HAM Total			-	-	-	67	-	-	-
	HCB	506220	MISC STEAM POWER EXP-HILL	-	-	-	32	-	-	-
		506220 Total		-	-	-	32	-	-	-
	HCB Total			-	-	-	32	-	-	-
	HGA	500210	OPER SUPV & ENG-SHIPMAN	16	-	1,715	1,689	551	1,230	-
		500210 Total		16	-	1,715	1,689	551	1,230	-
		500220	OPER SUPV & ENG-HILL	7,675	23,224	19,423	14,802	39,700	28,121	30,749
		500220 Total		7,675	23,224	19,423	14,802	39,700	28,121	30,749
		500230	OPER SUPV & ENG-PUNA	68	-	79	3,733	23	1,169	196
		500230 Total		68	-	79	3,733	23	1,169	196
		506210	MISC STEAM POWER EXP-SHIPMAN	-	44	-	-	-	-	4,126
		506210 Total		-	44	-	-	-	-	4,126
		506220	MISC STEAM POWER EXP-HILL	156	337	-	-	46	-	84
		506220 Total		156	337	-	-	46	-	84
		506230	MISC STEAM POWER EXP-PUNA	-	-	-	80	38	-	84
		506230 Total		-	-	-	80	38	-	84
		546260	OPER SUPV & ENG- KANOELEHUA	726	255	284	-	150	368	-
		546260 Total		726	255	284	-	150	368	-
		546280	OPER SUPV & ENG- KEAHOE	1,773	-	225	820	971	2,884	-
		546280 Total		1,773	-	225	820	971	2,884	-
		546290	OPER SUPV & ENG- KEAHOE CT2	42	-	270	-	-	-	-
		546290 Total		42	-	270	-	-	-	-
		546300	OPER SUPV & ENG- OTH PRD-PUNA CT-3	76	1,503	-	-	-	-	-
		546300 Total		76	1,503	-	-	-	-	-
		549280	MISC EXP OTH PROD-KEAHOE	50	-	-	125	163	1,091	-
		549280 Total		50	-	-	125	163	1,091	-
		549300	MISC EXP OTH PROD-PUNA CT3	-	-	-	-	19	-	186
		549300 Total		-	-	-	-	19	-	186
	HGA Total			10,582	25,363	21,996	21,249	41,661	34,863	35,425
	HGC	500220	OPER SUPV & ENG-HILL	-	-	-	-	-	-	136
		500220 Total		-	-	-	-	-	-	136
		506230	MISC STEAM POWER EXP-PUNA	-	-	55	-	-	68	-
		506230 Total		-	-	55	-	-	68	-
		546280	OPER SUPV & ENG- KEAHOE	-	-	350	669	-	396	943
		546280 Total		-	-	350	669	-	396	943
		549280	MISC EXP OTH PROD-KEAHOE	(3)	9	948	278	2,839	10,977	12,675
		549280 Total		(3)	9	948	278	2,839	10,977	12,675
		549290	MISC EXP OTH PROD-KEAHOE CT2	-	1,017	262	-	201	-	-
		549290 Total		-	1,017	262	-	201	-	-
		549310	MISC EXP OTH PROD-KEAHOE CT4	-	-	-	-	-	-	-
		549310 Total		-	-	-	-	-	-	-

Hawaii Electric Light Company Inc.

2006 TEST YEAR

Training Expense - Non-Labor

RA	NARUC	acct desc	Sum of 2000rec	Sum of 2001rec	Sum of 2002rec	Sum of 2003rec	Sum of 2004rec	Sum of 2005rec	Sum of 2006YTD
HGC	Total		(3)	1,026	1,615	947	3,041	11,441	13,754
HGH	500220	OPER SUPV & ENG-HILL	328	36	318	212	548	3	-
	500220 Total		328	36	318	212	548	3	-
	506210	MISC STEAM POWER EXP-SHIPMAN	1,609	1,104	665	2,717	2,492	7,076	11,725
	506210 Total		1,609	1,104	665	2,717	2,492	7,076	11,725
	506220	MISC STEAM POWER EXP-HILL	11,327	10,437	1,495	12,203	25,049	38,191	24,767
	506220 Total		11,327	10,437	1,495	12,203	25,049	38,191	24,767
	506230	MISC STEAM POWER EXP-PUNA	937	2,360	1,673	13,124	14,023	4,014	2,215
	506230 Total		937	2,360	1,673	13,124	14,023	4,014	2,215
	549290	MISC EXP OTH PROD-KEAHOLE CT2	296	-	-	-	-	-	-
	549290 Total		296	-	-	-	-	-	-
	549300	MISC EXP OTH PROD-PUNA CT3	216	3,311	1,884	6,787	3,635	11,158	15,176
	549300 Total		216	3,311	1,884	6,787	3,635	11,158	15,176
HGH	Total		14,714	17,248	6,035	35,043	45,748	60,441	53,883
HGK	500220	OPER SUPV & ENG-HILL	30	-	-	-	-	-	-
	500220 Total		30	-	-	-	-	-	-
	546280	OPER SUPV & ENG- KEAHOLE	754	625	-	-	-	-	-
	546280 Total		754	625	-	-	-	-	-
	546290	OPER SUPV & ENG- KEAHOLE CT2	-	-	46	-	-	-	-
	546290 Total		-	-	46	-	-	-	-
	549260	MISC EXP OTH PROD-KANOELEHUA	-	113	-	-	-	-	-
	549260 Total		-	113	-	-	-	-	-
	549280	MISC EXP OTH PROD-KEAHOLE	745	226	1,146	1,212	1,876	5,450	10,700
	549280 Total		745	226	1,146	1,212	1,876	5,450	10,700
	549290	MISC EXP OTH PROD-KEAHOLE CT2	-	12	141	-	-	913	2,226
	549290 Total		-	12	141	-	-	913	2,226
HGK	Total		1,529	976	1,333	1,212	1,876	6,363	12,926
HGM	500210	OPER SUPV & ENG-SHIPMAN	269	-	-	-	-	-	-
	500210 Total		269	-	-	-	-	-	-
	500220	OPER SUPV & ENG-HILL	542	162	206	-	306	72	-
	500220 Total		542	162	206	-	306	72	-
	506220	MISC STEAM POWER EXP-HILL	526	-	245	3,710	3,468	7,131	3,442
	506220 Total		526	-	245	3,710	3,468	7,131	3,442
	506230	MISC STEAM POWER EXP-PUNA	193	-	-	-	-	-	-
	506230 Total		193	-	-	-	-	-	-
	546260	OPER SUPV & ENG- KANOELEHUA	83	626	189	42	9	185	-
	546260 Total		83	626	189	42	9	185	-
	546280	OPER SUPV & ENG- KEAHOLE	106	77	112	-	164	-	-
	546280 Total		106	77	112	-	164	-	-
	546290	OPER SUPV & ENG- KEAHOLE CT2	-	-	77	-	-	-	-
	546290 Total		-	-	77	-	-	-	-
	546300	OPER SUPV & ENG- OTH PRD-PUNA CT-3	(1)	11	-	-	37	-	-
	546300 Total		(1)	11	-	-	37	-	-
	549260	MISC EXP OTH PROD-KANOELEHUA	8,154	2,910	6,262	1,798	51	57	-
	549260 Total		8,154	2,910	6,262	1,798	51	57	-
	549280	MISC EXP OTH PROD-KEAHOLE	-	-	-	-	74	15	-

Hawaii Electric Light Company Inc.

2006 TEST YEAR
Training Expense - Non-Labor

RA	NARUC	acct desc	Sum of 2000rec	Sum of 2001rec	Sum of 2002rec	Sum of 2003rec	Sum of 2004rec	Sum of 2005rec	Sum of 2006YTD
	549280	Total	-	-	-	-	74	15	-
	549290	MISC EXP OTH PROD-KEAHOLE CT2	159	-	-	-	-	-	-
	549290	Total	159	-	-	-	-	-	-
	549300	MISC EXP OTH PROD-PUNA CT3	288	-	-	-	-	-	-
	549300	Total	288	-	-	-	-	-	-
HGM	Total		10,319	3,786	7,091	5,550	4,110	7,460	3,442
HGP	500220	OPER SUPV & ENG-HILL	-	-	-	-	278	-	-
	500220	Total	-	-	-	-	278	-	-
	506210	MISC STEAM POWER EXP-SHIPMAN	(11)	449	3,307	5,808	3,650	502	9,828
	506210	Total	(11)	449	3,307	5,808	3,650	502	9,828
	506220	MISC STEAM POWER EXP-HILL	5,094	4,808	2,557	17,097	9,298	28,139	20,796
	506220	Total	5,094	4,808	2,557	17,097	9,298	28,139	20,796
	506230	MISC STEAM POWER EXP-PUNA	1,448	2,189	5,199	22,351	18,001	13,182	47,556
	506230	Total	1,448	2,189	5,199	22,351	18,001	13,182	47,556
	549290	MISC EXP OTH PROD-KEAHOLE CT2	59	-	-	224	-	-	-
	549290	Total	59	-	-	224	-	-	-
	549300	MISC EXP OTH PROD-PUNA CT3	107	929	23	90	129	893	1,003
	549300	Total	107	929	23	90	129	893	1,003
HGP	Total		6,696	8,375	11,086	45,569	31,357	42,716	79,183
HGT	500220	OPER SUPV & ENG-HILL	-	-	-	5,358	4,050	2,841	4,994
	500220	Total	-	-	-	5,358	4,050	2,841	4,994
	506220	MISC STEAM POWER EXP-HILL	-	-	-	-	55	-	-
	506220	Total	-	-	-	-	55	-	-
HGT	Total		-	-	-	5,358	4,105	2,841	4,994
HGW	506210	MISC STEAM POWER EXP-SHIPMAN	21	189	30	-	-	-	14,619
	506210	Total	21	189	30	-	-	-	14,619
	506220	MISC STEAM POWER EXP-HILL	784	12	-	-	-	-	-
	506220	Total	784	12	-	-	-	-	-
	506230	MISC STEAM POWER EXP-PUNA	2,182	2,108	-	-	-	-	8,898
	506230	Total	2,182	2,108	-	-	-	-	8,898
HGW	Total		2,988	2,309	30	-	-	-	23,517
HGX	506220	MISC STEAM POWER EXP-HILL	-	-	-	-	49	-	-
	506220	Total	-	-	-	-	49	-	-
	546260	OPER SUPV & ENG- KANOELEHUA	-	-	-	-	700	2,072	464
	546260	Total	-	-	-	-	700	2,072	464
	549260	MISC EXP OTH PROD-KANOELEHUA	-	-	-	35	2,715	3,572	13,494
	549260	Total	-	-	-	35	2,715	3,572	13,494
	549280	MISC EXP OTH PROD-KEAHOLE	-	-	-	42	479	16	-
	549280	Total	-	-	-	42	479	16	-
HGX	Total		-	-	-	78	3,942	5,660	13,958
HNL	506220	MISC STEAM POWER EXP-HILL	-	-	-	63	-	-	-
	506220	Total	-	-	-	63	-	-	-
	506230	MISC STEAM POWER EXP-PUNA	-	-	-	27	-	-	-
	506230	Total	-	-	-	27	-	-	-
HNL	Total		-	-	-	89	-	-	-
HNP	506220	MISC STEAM POWER EXP-HILL	-	-	-	38	-	-	-

Hawaii Electric Light Company Inc.

2006 TEST YEAR

Training Expense - Non-Labor

	RA	NARUC	acct desc	Sum of 2000rec	Sum of 2001rec	Sum of 2002rec	Sum of 2003rec	Sum of 2004rec	Sum of 2005rec	Sum of 2006YTD
		506220	Total	-	-	-	38	-	-	-
		506230	MISC STEAM POWER EXP-PUNA	-	-	-	25	-	-	-
		506230	Total	-	-	-	25	-	-	-
	HNP	Total		-	-	-	63	-	-	-
	HNS	506230	MISC STEAM POWER EXP-PUNA	-	-	-	51	-	-	-
		506230	Total	-	-	-	51	-	-	-
	HNS	Total		-	-	-	51	-	-	-
	HWA	506230	MISC STEAM POWER EXP-PUNA	-	-	-	79	-	-	-
		506230	Total	-	-	-	79	-	-	-
	HWA	Total		-	-	-	79	-	-	-
	HWI	506230	MISC STEAM POWER EXP-PUNA	-	-	-	41	-	-	-
		506230	Total	-	-	-	41	-	-	-
	HWI	Total		-	-	-	41	-	-	-
	Operations	Total		46,825	59,085	49,186	115,504	135,840	171,786	241,082
Maintenance	HGK	510220	MAINT SUPV & ENG-HILL	-	61	-	-	-	-	-
		510220	Total	-	61	-	-	-	-	-
		514220	MAINT MISC STEAM PLANT-HILL	-	(38)	-	-	115	-	-
		514220	Total	-	(38)	-	-	115	-	-
		551280	MAINT SUPV & ENG- OTH PRD-KEAHOLE	2,655	-	-	-	-	-	-
		551280	Total	2,655	-	-	-	-	-	-
		554280	MAINT MISC PLANT- OTH PROD-KEAHOLE	935	-	-	-	-	-	-
		554280	Total	935	-	-	-	-	-	-
	HGK	Total		3,590	23	-	-	115	-	-
	HGM	510220	MAINT SUPV & ENG-HILL	-	1,477	520	-	498	1,453	9,645
		510220	Total	-	1,477	520	-	498	1,453	9,645
		514220	MAINT MISC STEAM PLANT-HILL	-	309	2,736	429	30,536	2,959	29
		514220	Total	-	309	2,736	429	30,536	2,959	29
	HGM	Total		-	1,786	3,255	429	31,034	4,412	9,674
	HGT	510220	MAINT SUPV & ENG-HILL	-	-	-	-	-	-	-
		510220	Total	-	-	-	-	-	-	-
		514220	MAINT MISC STEAM PLANT-HILL	-	-	-	405	-	-	-
		514220	Total	-	-	-	405	-	-	-
	HGT	Total		-	-	-	405	-	-	-
	HGX	514220	MAINT MISC STEAM PLANT-HILL	-	-	-	100	-	56	-
		514220	Total	-	-	-	100	-	56	-
	HGX	Total		-	-	-	100	-	56	-
	Maintenance	Total		3,590	1,809	3,255	935	31,149	4,468	9,674
	Grand	Total		50,415	60,894	52,441	116,439	166,988	176,254	250,756

CA-IR-338

Ref: Responses to CA-IR-78(a) and CA-IR-2 (T-5), Attachments 2A and 2D; Materials and Outside Services.

- a. Please confirm (or explain if not confirmed) that judgment was used by HELCO personnel to decide whether to rely upon an average of historical actual costs from 2001-2004, an average of 2003 & 2004, simply 2004 amounts or separately calculated input amounts for Materials, ProCard Purchases and Outside Services (EE=201, 205 and 501) budget inputs.
- b. Explain the basis for the 1.0424 escalation factor that was used for some, but not all, of the input values referenced in the response to part (a) above.
- c. Provide a detailed explanation and copy of supporting documentation relied upon by HELCO to determine that the following Outside Services activity budget values displayed on CA-IR-2, (T-5), Attachment 2D are reasonable for ratemaking purposes:
 1. \$66,000 for HGK 263 CNS on page 15.
 2. \$50,000 for HGK 265 CNS on page 16.
 3. \$80,182 for HGK 272 C04 on page 16.
 4. \$22,980 (times 5) for HGM 256 on page 18.
 5. \$38,970 for HGM 256 RST on page 18.
 6. \$72,780 for HGM 261 SO3 on page 19.
 7. \$63,150 for HGM 261 SO4 on page 19.
 8. \$62,390 for HGM 262 RO5 on page 19.
 9. \$40,120 for HGM 263 PO1 on page 20.
 10. \$114,950 for HGM 265 SST on page 20.
 11. \$54,350 for HGM 268 SST on page 20.
 12. \$141,870 for HTW 242 SST on page 26.
 13. \$111,290 for HGX 277 ANS on page 28.
- d. If item number 12 in the previous part (b) above is for start-up propane for the Shipman Steam plant, please explain why the reclassification adjustment discussed at T-5, page 51, line 18 is not in the amount of \$141,870, rather than \$100,000.
- e. If item number 12 in the previous part (b) above is for start-up propane for the Shipman Steam plant, please explain why a different propane amount of \$232,178 is discussed at T-4, page 45.

HELCO Response:

- a. As discussed in response to CA-IR-78, subpart a, "The non-project amounts input for the 2006 budget (before adjustments and normalizations) by expense element are derived from a series of spreadsheets summarizing the actual comparable amounts for prior years 1999

through 2004, with a computed average of such costs for the years 2001 through 2004 (or less, such as 2003 and 2004), utilizing either the calculated average, or a separately calculated input amount.”

- b. The 1.0424 escalation factor is an amount used to estimate how costs are anticipated to increase from 2004 dollars to 2006 dollars. The escalation factors are received from management accounting and are used each year in the budgeting process.
- c. All supporting documentation relied upon by HELCO to determine Outside Services activity budget values displayed on CA-IR-2, (HELCO T-5), Attachment 2D, summarized on pages 1 – 8 with associated detail on pages 9 – 31 referenced below, have already been provided in CA-IR-2.
 - 1. \$66,000 for HGK 263 CNS on page 15. This cost for Keahole, for maintaining station common structures and systems (preventative), was based on 2004 actuals. 2004 represents a better picture of how costs will come in during 2006 as Keahole has become a critical power station with the operation of CT-4 and CT-5 in supporting the grid.
 - 2. \$50,000 for HGK 266 CNS on page 16. This cost for Keahole, for maintaining station common miscellaneous equipment (preventative), was based on 2004 actuals. 2004 represents a better picture of how costs will come in during 2006 as Keahole has become a critical power station with the operation of CT-4 and CT-5 in supporting the grid.
 - 3. \$80,182 for HGK 272 C04 on page 16. This cost coded to Keahole is for maintaining combustion turbine generator and electrical equipment (preventative). There is no back up for the amount and thus we are proposing here to adjust this amount out of the Test

Year.

4. \$22,980 (times 5) for HGM 256 on page 18. This cost for planning/scheduling maintenance and construction at Hill Plant 5, Hill Plant 6, Puna Steam, and Shipman 3 and Shipman 4, was based on 2004 actuals. This is a new cost that originated out of the Asset Optimization program for planning/scheduling maintenance and is expected to continue.
5. \$38,970 for HGM 256 RST on page 18. This cost for planning/scheduling maintenance & construction for Hill common plant was based on 2004 actuals for a Hill Steam Coordination Study. This is a new cost expected to continue with similar types of studies.
6. \$72,780 for HGM 261 SO3 on page 19. This cost for maintaining steam turbogenerator and related equipment (predictive) at Shipman Plant 3 is based on an average of 2001-2004 actuals. This historical trend is expected to continue.
7. \$63,150 for HGM 261 SO4 on page 19. This cost for maintaining steam turbogenerator and related equipment (predictive) at Shipman Plant 4 is based on an average of 2001-2004 actuals. This historical trend is expected to continue.
8. \$62,390 for HGM 262 RO5 on page 19. This cost for maintaining steam turbogenerator and related equipment (corrective) at Hill 5 is based on an average of 2001-2004 actuals. This historical trend is expected to continue.
9. \$40,120 for HGM 263 PO1 on page 20. This cost for maintaining station common structures and systems (preventative) at Puna Plant was based on an average of 2001-2004 actuals. This historical trend is expected to continue.
10. \$114,950 for HGM 265 SST on page 20. This cost for maintaining station common

structures and systems (corrective) at Shipman Plant was based on an average of 2001-2004 actuals. This historical trend is expected to continue.

11. \$54,350 for HGM 268 SST on page 20. This cost for maintaining station common miscellaneous equipment (corrective) at Shipman Plant was based on an average of 2001-2004 actuals. This historical trend is expected to continue.
 12. \$141,870 for HGW 242 SST on page 26. This cost for operating and monitoring plant equipment (make rounds) – boiler related, at Shipman Plant is based on 2004 actuals for boiler ignitors. 2004 represents a better picture (compared to an average of the past) of how costs will be incurred during 2006 as Shipman Plant is now in operation. Since this ignitor equipment did not previously exist at Shipman plant, there was no prior propane consumption and ignitor expense.
 13. \$111,290 for HGX 277 ANS on page 28. This cost for maintaining internal combustion engine, generator and related equipment (corrective) for HGX is based on an average of 2003-2004 actuals. This average represents a better picture of how costs will come in during 2006 since this area is closer to being fully staffed.
- d. Item number 12 in subpart c. above is partly for start-up propane and partly for other start up service requirements for the Shipman Steam plant. The reclassification adjustment discussed at HELCO T-5, page 51, line 18 is only for the estimated propane cost of \$100,000 which was removed from the Production Department's operating budget.
 - e. The \$100,000 discussed above is the budgeted amount that the Production Department prepared based on 2004 actuals. A different propane amount of \$232,178 is discussed at HELCO T-4, page 45, which includes propane expense for the (1) Shipman plant based on the number of projected starts the units will have during the test year, and (2) the Hill plant

based on HELCO's historical costs (average of 2001 – 2005) for propane. (See HELCO-WP-405, page 1 and HELCO-WP-404, page 8.)

CA-IR-339

Ref: Response to CA-IR-2, HELCO T-5, Attachment 2H; Lalamilo Wind Farm.

Please provide the following information regarding the projected O&M expense associated with the Lalamilo Wind Farm:

- a. A copy of the contracts/agreements associated with such charges.
- b. A copy of a specimen invoice for most current period charges in 2006 for Lalamilo.
- c. If Lalamilo is operated by an affiliate, provide a detailed December 2005 and December 2004 stand alone income statement and balance sheet for such affiliate.
- d. Provide comparable actual 2005 and year-to-date 2006 Lalamilo expenses in the same detailed line item breakdown as set forth in Attachment 2H, page 1.

HELCO Response:

- a. See Attachment 1, "Windfarm Services Agreement." Attachment 1 is confidential and will be provided pursuant to Protective Order No. 22593.
- b. See Attachment 2, "Pacific Energy Conservation Services, Inc." invoice. Attachment 2 is confidential and will be provided pursuant to Protective Order No. 22593.
- c. Lalamilo is operated by an affiliate. Attachment 3 shows the December 2005 and December 2004 stand alone income statement. The balance sheet is not produced separately, and is instead included in HELCO's balance sheet. Attachment 3 is confidential and will be provided pursuant to Protective Order No. 22593.
- d. Comparable actual 2005 and June 30, 2006 year-to-date Lalamilo expenses in the same detailed line item breakdown as set forth in Attachment 2H, page 1 is provided in Attachment 4.

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Hawaii Electric Light Company Inc.									
2006 TEST YEAR									
Lanailo Windfarm O&M Forecast 2006									
								Actual	
								(Thru 6/30/06)	Forecast
Description		Cost Center	Expense Element	2001	2002	2003	2004	2005	2006
Capital:									
Lanailo Tools & Equipment		HLA278F01NIH0000059	201	1,121.57	0.00	0.00	0.00	0.00	0.00
Operations:									
	546500	HLA244F01NENHCZZZZZ	501						
Tools & Equipment	546500	HLA244F01NEH0000059	201	(1,121.57)					
Operational materials	546500	HLA244F01NENHLZZZZZ	201	43,494.35	32,131.34	29,286.31	6,817.38	13,901.18	5,544.00
Operations - outside services (see below)	546500	HLA244F01NENHLZZZZZ	501	35,629.68	34,019.16	39,358.34	35,553.17	36,137.11	16,916.00
	546500	HLA244F01NENHLZZZZZ	522						
	546500	HLA244F01NENHLZZZZZ	900						
	546500	HLA244F01NENHLZZZZZ	905						
	546500	HLA244F01NENHZZZZZZ	201						
Pecs labor miscoding	546500	HLA244F01NENHZZZZZZ	501						
Operations Total				78,002.46	66,150.50	68,644.65	42,370.55	50,038.29	22,460.00
Preventive maintenance - materials	553500	HLA278F01NENHLZZZZZ	201	2,342.32	659.93	845.72	2,513.83	7,151.22	757.00
Preventive maintenance - vehicle	553500	HLA278F01NENHLZZZZZ	301						
Preventive maintenance - Pecs labor	553500	HLA278F01NENHLZZZZZ	501	36,835.36	49,716.72	59,156.03	54,409.15	83,934.05	21,807.00
Predictive maintenance - materials	553500	HLA279F01NENHLZZZZZ	201	7,455.22	1,387.29	6,787.91	19,585.45	21,806.74	15,858.00
Predictive maintenance - Pecs labor	553500	HLA279F01NENHLZZZZZ	501	36,835.36	49,714.64	59,108.11	54,409.15	57,118.05	21,620.00
Predictive maintenance - outside service	553500	HLA279F01NENHLZZZZZ	501						
Predictive maintenance - temporary hire	553500	HLA279F01NENHLZZZZZ	503	22,926.31	30,178.37	5,485.19	0.00	0.00	0.00
Corrective maintenance - materials	553500	HLA280F01NENHLZZZZZ	201	35,254.47	154,526.42	6,186.56	12,908.10	13,814.09	0.00
Corrective maintenance - vehicle	553500	HLA280F01NENHLZZZZZ	301						
Corrective maintenance - Pecs labor	553500	HLA280F01NENHLZZZZZ	501	36,835.28	50,027.11	40,680.63	54,435.76	63,795.09	21,620.00
Corr maintenance - outside service (HSI)		HLA280F01NENHLZZZZZ	501		26,727.62	59,108.12	0.00	0.00	0.00
Road Repairs		HLA932F01NENHLZZZZZ	501		28,650.00		7,440.00	0.00	0.00
Vehicle registration expense	554500	HLA942HELNENHLZZZZZ	301					666.21	0.00
Vehicle depreciation & costing	554500	HLA942HELNENHLZZZZZ	301	1,541.00	5,060.75	7,820.98	3,864.74	5,129.04	2,418.00
Others (miscoding to labor)	554500	HLA942				722.47	0.00	0.00	0.00
Maintenance Total				180,025.32	396,648.85	245,901.72	209,566.18	253,414.49	83,880.00
Total				259,149.35	462,799.35	314,546.37	251,936.73	303,452.78	106,340.00

CA-IR-340

Ref: HELCO-T-5, pages 51-52 and 57-58; Boiler Draw Engineering Docs.

According to the testimony at page 52, "A firm price was not received until early 2006. It should be noted that we are adjusting and seeking recovery for this P&ID project. It is further normalized as discussed in the section on normalization adjustments." Please provide the following:

- a. Copies of service proposals, contracts and other documentation of HELCO's commitment to perform the P&ID work as well as the referenced "firm price."
- b. Explain whether and when similar projects were performed at HECO or MECO plants and the scope and cost of such efforts.
- c. State whether HELCO intends to practice deferral and amortization accounting on its books for the "amortization period of three years" that is proposed at page 57.
- d. According to testimony page 52, "The need for this [P&ID work] was identified after the budget was complete." Please explain and provide copies of documents associated with how the "need was identified."
- e. What operational and/or maintenance benefits or cost savings will be achieved by completing the referenced P&ID project work?

HELCO Response:

- a. HELCO committed \$99,630 for the Shipman and Puna P&ID work. See Attachment 1, pages 1 to 5, for service proposal and change orders from Connexsys Engineering for a firm price \$95,000 for Shipman and Puna Piping and Instrument Diagrams. See Attachment 1, pages 6 to 7, for the service proposal from Switchgear & Power Services, LLC in the amount of \$4,630 for Shipman and Puna electrical drawings. (The service proposal and change orders from Connexsys Engineering in Attachment 1 are confidential and will be provided pursuant to Protective Order No. 22593, dated June 30, 2006.)

To-date, HELCO made payment in the amount of \$96,131 to Connexsys Engineering and Switchgear & Power Services, LLC for this work. Refer to Attachment 2 for copies of

invoices. (The invoices in Attachment 2 are confidential and will be provided pursuant to Protective Order No. 22593, dated June 30, 2006.)

HELCO has a separate \$150,000 in adjustments for the Hill Boiler Draw Engineering Docs (HELCO-WP-510, page 2), and a corresponding normalization of (\$66,300) for related yearly maintenance (HELCO-WP-510, page 3). This project was determined as not being needed, and therefore HELCO proposes to reduce its test year estimate by \$83,700 (\$150,000 less \$66,300).

- b. It is unknown whether or when similar projects were performed at HECO or MECO plants.
- c. HELCO does not intend to practice deferral and amortization accounting on its books for the “amortization period of three years” that is proposed at page 57.
- d. This project was initiated primarily based on the need for updated drawings for troubleshooting, training, and documentation control. See Attachment 3.
- e. Operations and maintenance will benefit from accurate and complete P&IDs in the form of enhanced operator training, maintenance troubleshooting, and documentation of existing systems. Training of plant operators requires accurate P&ID's as they are required to trace (walk down) all equipment pipelines and valves within each plant. Troubleshooting plant systems is done by individuals with historical knowledge gained over years of experience. Accurate P&ID's are necessary to safely secure equipment for maintenance activities so that all sources of energy can be isolated from the equipment to be worked on. Old P&IDs when available, were utilized, but were unreliable due to changes in the plants, were severely deteriorated (eaten by termites in some cases), and some had simply crumbled due to age and the materials on which they were originally printed.

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PRODUCTION DEPARTMENT DOCUMENTATION CONTROL

Purpose/Objectives: The HELCO plants currently do not have or have out-dated Piping & Instrumentation Diagrams (P&ID). Some plants have had sketches of plant's sub-systems made. These sketches do not graphically represent the entire plant's process piping and do not include instrumentation. P&ID's will need to be developed to represent the plant's actual piping and instrumentation. These P&ID's will capture "what is actually out there" and may be used for project design engineering, process hazard analysis, operations and maintenance troubleshooting, process documentation, operator training, and documentation control.

The P&ID's should be available in electronic format or hard copy and should be readily available for viewing by Operations, Maintenance, Technical, Environmental, and Safety personnel.

Other plant drawings (e.g. -process flow diagrams, electrical, civil, structural, mechanical, etc.) and equipment data information should be available, as well.

Scope Description:

- *Develop a centralized documentation control area where:*
 - *develop a standardize, logical drawing and equipment numbering system to be used for all Production Department generating plants and equipment.*
 - *develop standardize drawing symbols for plant equipment.*
 - *hard copy drawings can be stored in flat files and be duplicated.*
 - *hard copy drawings can be copied or scanned.*
 - *electronic drawings (scanned or CAD) can be accessed and printed out by all users.*
 - *hardware allowing electronic drawings (CAD) to be altered by authorized person(s) only.*
 - *other documentation can be stored in file cabinets (equipment vendor data, equipment data sheets, project files, etc.).*
 - *a complete, up-to-date master drawing list altered by authorized person(s) only.*
- *Develop electronic and hard copy P&ID's for each Production Department generating plant which can be used for the purposes mentioned above. P&ID's should include links to instrumentation &*

controls, mechanical equipment, and line number databases. Process flow diagrams and electrical drawings should be considered, as well.

- *Electronically scan other existing hard copy plant drawings (e.g. - civil, structural, mechanical, etc.). These drawings typically do not have to be revised periodically.*

Resources Needed: A centralized documentation control area will need to be constructed or set aside & modified that will meet the space requirements for storage equipment, computer station with printer/scanner/CAD capability, working area, etc.

Outside services will be needed to field walk and document the plant's piping and instrumentation, electronically draft all drawings on a HELCO compatible CAD system, "as-built" final drawings, and provide hard copies and electronic files of all drawings.

HELCO labor will be required to provide and maintain HELCO drawing standards, review and approve drawings, monitor outside services progress, and incorporate into HELCO's documentation control system.

Additional HELCO labor will be needed on the permanent basis to control the documentation control area and to make final "as-built" revisions. This individual would control all drawing revisions and master drawing list.

Justification: Puna Plant does not have P&ID drawings. Sketches have been drawn but have not been kept current. Shipman Plant and Hill Plant drawings are out of date and do not include the latest revisions. New capital or maintenance projects are not able to incorporate modifications into existing plant drawings for review, prior to project construction. Approved and completed capital and maintenance projects are not being "as-built" into any drawings. P&ID's are effective troubleshooting tools for the Operations and Maintenance Departments. Operator training effectiveness can be increased with up-to-date P&ID's. There are no centralized area where any drawings or equipment information can be found. Locating drawings can be a time consuming process. Some of the most up-to-date drawings/sketches are those (hand marked, non-official) kept in electricians or mechanics lockers.

Issues, Impacts, Considerations: Changes in plant piping and instrumentation may not be documented, and therefore, requiring more troubleshooting time during plant emergencies.

Capital and maintenance projects may be implemented without a thorough design review prior to construction. Not knowing that the drawing you have IS the latest revision requires a thorough field walk. Although, this is a good habit, it is a time consuming effort. Time required to locate various documents from various locations for routine activities can be very time consuming.

Operator training may not be as consistent without up-to-date P&ID's and other drawings.

CA-IR-341

Ref: HELCO-T-5, page 53; HELCO-WP-510, page 5; Temporary Help Adjustment.

According to the testimony at page 53, "Production plans to spend the additional amount on overtime to man Shipman Plant as well as on temporary help contracted to fill in for the vacant maintenance positions." Please provide the following:

- a. Explain whether the referenced "vacant maintenance positions" are included or excluded in test year proposed labor costs.
- b. If the response to part (a) of this information request is that the "vacant" positions are fully included in the test year expenses, please explain why expenses for temporary help contracted to fill in for the vacancies should also be included in the revenue requirement.
- c. Explain where the EE 108 and EE 150 "2006 Variance" amounts shown on HELCO-WP-510, page 5 were contained in the Company's labor input spreadsheets within the response to CA-IR-1 (T-5).
- d. Provide a revised comparison of variance data, comparable in format and content to HELCO-WP-510, page 5, but containing actual 2006 data for all available months in place of the "Updated Forecast" data contained in the filing.
- e. Explain where the amounts shown on HELCO-WP-510, page 5, are set forth in HELCO-WP-101 for the referenced "Account No. 552760."
- f. Provide a summary of actual EE-503 Temporary Hire expensed charge amounts to each production department RA for each of the years 1999 through 2005 and for 2006, to-date.
- g. Provide a summary of budgeted EE-503 Temporary Hire expensed charge amounts for each production department RA for the test year.
- h. HELCO-WP-510, page 5, in Assumptions note 2 references overtime requirements associated with hiring and training 5-7 operator trainees mainly for Shipman. Please provide the following information:
 1. Explain whether the \$2.3 million of overtime in the "Budget" row for EE 150 was included in the test year forecast.
 2. Provide the overtime hours by RA that were included in the test year forecast in connection with the described training activities.
 3. State whether HELCO intends to train 5-7 operator trainees on a normal ongoing basis after 2006 and provide explanatory historical operator training statistics to support the

response.

4. If the response to part h(3) of this information request is negative, explain why no normalization adjustment is proposed by HELCO to include only normal ongoing overtime hours/costs associated with hiring and training operators.

HELCO Response:

- a. As discussed in HELCO T-5, pages 73, 77 and 78, the 2006 test year estimate assumes that each authorized position is filled throughout the entire year and no vacancies exist, thus, the positions are included in test year labor costs.
- b. As discussed in HELCO T-5, page 78, the hiring of outside temporary workers are more costly than having the associated vacancies filled with permanent workers. As shown in subpart f., expenses for temporary help contracted to fill in for the vacancies have been incurred in the past and are anticipated to continue in the future, which is HELCO's basis for why these costs should be included in the revenue requirement.
- c. The EE 108 and EE 150 "2006 Variance" amounts shown on HELCO-WP-510, page 5 are not contained in the Company's labor input spreadsheets within the response to CA-IR-1 (T-5). As discussed on HELCO T-5, page 53, the net "2006 Variance" of \$62,000 is recorded in the test year as a budget adjustment to Account 552260 for outside services-temporary help (and not to labor). As shown on page 5 of HELCO-WP-510, it is the net amount of actual (January 2006) plus updated production labor and contracted temporary help over the original budgeted amounts.
- d. See Attachment 1 for a revised comparison of variance data, comparable in format and content to HELCO-WP-510, page 5, but containing actual 2006 data for all available months (January through August) in place of the "Updated Forecast" data contained in the filing.
- e. The referenced "Account No. 552760" contains a typographical error. It should instead read

“Account No. 552260.” Account No. 552260 can be found on HELCO-WP-101(F), page 623. The amounts shown on HELCO-WP-510, page 5, for the budgeted EE 108 and EE 150 are set forth in HELCO-WP-101 labor report HELCO-WP-101(F) throughout numerous NARUC codes and Production RA’s (e.g., HGA, HGC, HGH, etc.). Also included in HELCO-WP-101(F) is the budgeted labor for other Company departments. HELCO-WP-510, page 5 only reflects that of Production RA’s (e.g., HGA, HGC, HGH, etc.). Labor workpapers were provided in attachments to HELCO’s response to CA-IR-1.

- f. See Attachment 2 for a summary of actual EE-503 Temporary Hire expensed charge amounts to each production department RA for each of the years 2000 through 2005 and for August 31, 2006 year-to-date. There is no report prepared with 1999 information.
- g. The 2006 TY estimate for EE-503 included only the \$62,000 budget adjustment to Account 552260 for outside services temporary hire as discussed in HELCO T-5, pages 53 and 54. EE-503 Temporary Hire was not budgeted in 2006. The adjustment (per HELCO WP-510, page 5) is the net amount of actual (January 2006) plus updated production labor and contracted temporary help over the original budgeted amounts. As shown in Attachment 2, the amount incurred for temporary hire (\$295,959) as of August 2006 year-to-date is lower than what HELCO expended for outside services – temporary hires in 2003, 2004 and 2005.
- h. Overtime requirements associated with hiring and training Shipman operator trainees are discussed in HELCO’s response to CA-IR-68 and CA-IR-74.
 - 1. The amounts in the “Budget” row for EE 150 are included in the test year forecast.
 - 2. It is not possible to breakdown overtime hours by RA that were included in the test year forecast by activity.
 - 3. Yes. Due to pending retirements of operators and movements in the line of progression,

training will be ongoing beyond 2006. Training operator trainees is discussed in
HELCO's response to CA-IR-68 and CA-IR-74.

4. Not applicable.

Hawaii Electric Light Company, Inc.
Variance Report - Actual Labor and Temporary Hire vs Budget

CA-IR-341
DOCKET NO. 05-0315
ATTACHMENT 1
(UPDATED HELCO-WP-510, PAGE 5)

Test Year 2006 Estimate

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2006 YearTotal
Budget													
EE 108 WorkComp	3,204	3,204	3,204	3,204	3,204	3,204	3,204	3,204	3,204	3,204	3,204	3,408	38,654
EE 150 Overtime	199,289	196,822	193,481	188,850	188,655	199,544	196,861	188,956	197,100	201,611	197,133	199,692	2,347,994
EE 150 Regular Time	478,564	472,642	464,619	453,497	453,029	479,178	472,733	453,751	473,307	484,140	473,387	479,534	5,638,380
EE 503 O/S-Temp	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Budget	681,057	672,668	661,304	645,552	644,888	681,926	672,798	645,912	673,611	688,954	673,724	682,634	8,025,028

	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Updated Forecast				
EE 108 WorkComp	0	0	0	0	0	0	0	0	3,204	3,204	3,204	3,408	13,020
EE 150 Overtime	192,720	315,283	229,769	178,111	204,486	123,841	276,578	183,483	197,100	201,611	197,133	199,692	2,499,806
EE 150 Regular Time	450,635	284,916	472,016	438,429	407,968	430,060	251,503	438,423	473,307	484,140	473,387	479,534	5,084,318
EE 503 O/S-Temp	37,663	15,120	91,398	(24,678)	30,581	109,185	11,978	24,712	37,000	37,000	37,000	37,000	443,959
Total Actual + Update	681,018	615,319	793,183	591,862	643,035	663,086	540,059	646,618	710,611	725,954	710,724	719,634	8,041,103

	2006 Variance												
EE 108 WorkComp	(3,204)	(3,204)	(3,204)	(3,204)	(3,204)	(3,204)	(3,204)	(3,204)	(0)	(0)	(0)	0	(25,634)
EE 150 Labor Cost	(34,497)	(89,285)	43,685	(25,807)	(29,230)	(124,821)	(141,513)	(20,801)	0	0	0	0	(402,250)
EE 503 O/S-Temp	37,663	15,120	91,398	(24,678)	30,581	109,185	11,978	24,712	37,000	37,000	37,000	37,000	443,959
Total Variance	(39)	(57,349)	131,879	(53,690)	(1,853)	(18,840)	(132,739)	706	37,000	37,000	37,000	37,000	16,076

Assumptions:

- Workers Comp:** aside from actuals recorded in Jan through August being under budget, the remaining months will be assumed not change from the original budget.
- Overtime:** includes an increase through Aug due to the hiring and training of 5-7 operator trainees mainly for Shipman. All training is instructed by the Asst Supt (CYamamoto) and a Shift Supervisor (NKramer). Since the Asst Supv is currently training the operator trainees hired in the last two months, 100% of Shift Supervisor training time will be on overtime, as well as the need to fill in of the vacated shifts while training is occurring. Until the training is complete and the trainees move up through the line of progression ("LOP"), all shifts at Shipman will continue to be done on overtime. It is expected that the overtime will be back to budgetary amounts by the end of August when training is complete. Further, anything over 10 shifts at Shipman will be performed on overtime. For the maintenance group, the GH and GX groups will have to double up with each of their new mechanic positions until that person is oriented.
- Regular time:** for similar reasons listed above, regular time is expected to continue to be under budget due to vacancies, and should be back in line with budget by year end.
- O/S-Temp:** we currently have 3 temporary helpers in the maintenance group. This will continue until the vacant mechanic/supervisor positions are filled, and is expected to continue through year end. Nothing was budgeted for 2006.

CA-IR-341
DOCKET NO. 05-0315
ATTACHMENT 1
PAGE 1 OF 1
(Updated HELCO-WP-510, PAGE 5)

CA-IR-341
DOCKET NO. 05-0315
ATTACHMENT 2
PAGE 1 OF 1

Hawaii Electric Light Company, Inc.
EE 503 Actuals

Test Year 2006

			Recorded Expenses						
									Thru 8/31/2006
	ra	ee	2000	2001	2002	2003	2004	2005	2006
Operations	HGA	503	-	-	-	23,154	-	-	-
	HGA Total		-	-	-	23,154	-	-	-
	HGK	503	-	714	-	-	-	-	-
	HGK Total		-	714	-	-	-	-	-
	HGP	503	13,632	-	-	-	-	1,200	-
	HGP Total		13,632	-	-	-	-	1,200	-
	HGT	503	-	-	-	825	-	-	-
	HGT Total		-	-	-	825	-	-	-
	HGW	503	17,181	-	-	-	-	-	-
	HGW Total		17,181	-	-	-	-	-	-
	HLA	503	-	4,405	-	-	-	-	-
	HLA Total		-	4,405	-	-	-	-	-
Operations Total			30,813	5,118	-	23,979	-	1,200	-
Maintenance	HGH	503	-	-	-	-	1,421	861	-
	HGH Total		-	-	-	-	1,421	861	-
	HGK	503	2,775	8,527	-	-	58,752	66,112	85,080
	HGK Total		2,775	8,527	-	-	58,752	66,112	85,080
	HGM	503	54,308	43,757	61,317	397,429	316,300	281,680	110,607
	HGM Total		54,308	43,757	61,317	397,429	316,300	281,680	110,607
	HGP	503	-	1,340	-	-	-	1,200	7,560
	HGP Total		-	1,340	-	-	-	1,200	7,560
	HGX	503	-	-	-	-	61,847	112,008	92,712
	HGX Total		-	-	-	-	61,847	112,008	92,712
	HLA	503	22,190	22,926	30,178	5,485	-	-	-
	HLA Total		22,190	22,926	30,178	5,485	-	-	-
Maintenance Total			79,273	76,550	91,495	402,914	438,319	461,861	295,959
Grand Total			110,086	81,668	91,495	426,893	438,319	463,061	295,959

CA-IR-342

Ref: HELCO-T-5, page 54; HELCO-532, lines 7-9 & 15 Reclassified Project Costs.

According to the testimony at page 54, "The cumulative increase of \$543,000 is a result of these projects having a change in scope to deem them incorrectly categorized as capital, as they originally were. Being that the projects are not a capital unit, they are O&M in nature, and have been reclassified to the O&M budget." Please provide the following:

- a. Explain with specificity what "change in scope" occurred that causes each of the referenced projects to no longer represent a "capital unit."
- b. State whether each of the projects (or comparable types of work) that are referenced has been performed at any other HELCO unit in the past.
- c. Provide the expensed charges associated with each project listed in the response to part (b) of this information request by RA and by year.
- d. Explain whether HELCO expects to perform the projects (or comparable types of work) that are referenced at any other HELCO unit in the future.
- e. Provide the estimated expensed charges associated with each project listed in the response to part (d) of this information request by RA and by projected future year.
- f. How much larger or broader in scope would each of the referenced projects need to be in order to represent a "capital unit" that would be subject to capitalization, rather than expensing?
- g. Provide a complete copy of HELCO's capital units descriptive catalogue that is used to determine capital versus expense treatment of individual projects.

HELCO Response:

- a. The projects did not change in scope; rather, the accounting treatment for the projects changed. A detailed review of each proposed project was done in the context of HELCO's Property Unit Catalogue (see subpart g). It was determined that these projects could not be identified as individual property units, and were thus removed from the capital expenditures budget and added to the O&M budget. (Refer to the discussion of the scope of work in response to part f.) Not only did the projects not qualify as property units, they also did not

meet the qualifications of betterment accounting. (Note that only the betterment portion would be capitalized, if the projects qualified for betterment accounting.) Regarding the Keahole HMI project, it is mainly software and programming costs, and is less than \$500,000. Under the Company's Accounting for Software policy, costs for software development projects less than \$500,000 should be classified as an O&M expense.

- b. In recent years, SCADA upgrades have been performed at Kanoelehua Operations Control Center ("KOCC") and at various plants in conjunction with control upgrades. No projects of the type that are referenced have been performed at any other HELCO unit, going back to 1999. It would be burdensome to research prior to 1999 since the records are not part of the Ellipse system.
- c. SCADA upgrades expense of \$96,516 was incurred in 2005 and charged to responsibility area HGA (Production Department - Administrative).
- d. The HMI (Human Machine Interface) upgrade project for Keahole's water treatment system is typical of an obsolete proprietary software and hardware platform that is no longer supported by its manufacturer. As these types of control systems become outdated or obsolete in the future, they will require replacement in order to maintain equipment functionality. These types of upgrades will occur in the future, but it is difficult to determine when and where the next upgrade will be required. Hill 6 is the only generating unit equipped with hydrogen gas generator cooling, and with the obsolete original 30 year old hydrogen analyzer replaced and the hydrogen dryer added in 2006, it is not likely to require replacement for several decades. Variable frequency motor drives ("VFD") are a recent addition to the power plants and the upgrade for Hill 6 was to replace the existing 480 volt VFD (and associated step down and step up) transformers with a 2300 volt VFD to

improve motor operating characteristics. It is possible that other installations of VFD's will be identified in the future and installed to improve plant operating characteristics. Low smoke fuel nozzles were installed on CT-1 in September 2006 to improve the unit's operating opacity when operating. Fuel nozzles are replaced on CT units on an as needed basis.

e. In response to subpart d, future estimated expense charges have not been determined, and are not currently budgeted.

f. In all cases, it is not the size or broadness of the project scope but rather the inclusion (or not) of that particular project as a property unit in HECO's Property Unit Catalogue. Each of the referenced projects is discussed below.

1. Hill 6 Hydrogen Dryer and Controls: Consistent with a recommendation by HELCO's property loss consultant, a hydrogen gas dryer with control panel was installed for the Hill 6 generator during its annual overhaul from July 8 to August 10, 2006. This is a part of the generator system (T-09.2), and is not listed as a property unit in the catalogue.
2. Hill 6 Boiler VFD Upgrades: This project would install variable frequency drive (VFD) upgrades for Hill 6. A VFD is a part of the boiler fan system located in the property unit catalogue on B-04.2. This project has been moved from 2006 to 2007 for completion, and thus the \$150,000 rate case adjustment as shown on HELCO-WP-510, page 2 will be reversed removing the \$150,000 from the Test Year 2006 estimates.
3. CT-1 Low Smoke Fuel Nozzles: This is for the purchase and installation of low smoke fuel nozzles and related hardware. They were installed during the annual inspection from September 6 to 17, 2006. The fuel nozzles are not discretely listed on page T-08.2 of the property unit catalogue as part of the turbine fuel system.

4. Keahole Water Treatment HMI Replacement: This project replaces the existing water treatment software and programming capability. The project is made up of mainly computer software and programming fees which are identified in the Company's Accounting for Software policy as an expense. The installation is currently scheduled to be completed by the end of December 2006.
- g. HELCO does not have its own Property Unit Catalogue. The Hawaiian Electric Company's ("HECO's") Property Unit Catalogue is used as guidance for determining capital versus expense treatment of individual projects. A copy of HECO's Property Unit Catalogue was provided to the Consumer Advocate and the Public Utilities Commission on May 9, 2003 in response to CA-IR-11 in Docket No. 02-0391.

CA-IR-343

Ref: HELCO-T-5, page 55; Response to CA-IR-64; Waiau and Puueo Penstock Repairs.

According to the testimony at page 55, "The cumulative increase of \$350,000 for Waiau and Puueo penstock repairs are due to the immediate need for inspection and maintenance of the entire penstock right-of-ways (excluding the intake structures and pipeline within the powerhouse). This would include cleaning, repair and treatment of wooden trestle, and repair of air release vault components as necessary, as well as repairs to concrete trestles and anchors, if necessary." Please provide the following:

- a. Provide detailed supporting workpapers and documentation for the test year estimated costs of penstock repairs.
- b. Provide copies of proposals, contracts and other documents supportive of HELCO's commitment to perform the referenced penstock repairs in 2006.

HELCO Response:

- a. The work to perform the Waiau and Puueo penstock repairs was not estimated in any detail because the scope of the work was not known at the time the initial estimates were made. In order to determine what specific repairs and maintenance were needed, a reconnaissance of the two rights-of-way ("ROW") was required, but (especially for Waiau) this first step of the process could not be done because the locations of the penstock ROWs were not known with accuracy and for the most part were not discernable due to heavy vegetation overgrowth and lack of accessibility due to the rough terrain. The initial estimates were prepared by HELCO's Technical Services staff. The following is the order of magnitude estimates that make up the budget estimate of \$350,000:

<u>Puueo</u>	
Clear ROW	\$80,000
Repair/Repaint Concrete Trestles	70,000
Repair/Repaint Wooden Trestle	90,000
Service Air Release Valves	<u>20,000</u>
Sub-Total Puueo	<u>\$260,000</u>

<u>Waiau</u>	
Clear ROW	\$50,000
Repair/Repaint Concrete Trestles	20,000
Service Air Release Valves	<u>20,000</u>
Sub-Total Puueo	<u>\$90,000</u>
Total Waiau and Puueo	<u>\$350,000</u>

Once the ROW clearing began and a Global Positioning System ("GPS") survey was done to precisely locate the buried penstocks, HELCO re-evaluated the scope and determined that the initial estimates are reasonable. The GPS survey also assured HELCO where those penstock sections are located with respect to the varying conservation district zone that runs along the Wailuku river banks (not all of the penstocks are located in the conservation zones) and whether permits would be required to clear those penstock locations. The Company subsequently obtained the required permits. The clearing work is the first step to accurately locate the ROWs for the penstocks. Previously, sugar growing operations kept most of the areas that the penstocks run through clear of heavy overgrowth.

HELCO anticipates spending approximately \$260,000 in 2006 and the remaining \$90,000 in 2007. The main cause of this is the unavailability of contractors to complete the intended work in 2006. HELCO will normalize the \$350,000 estimated cost of the project over 5 years which equals to \$70,000/year. An adjustment removing \$280,000 from the test year estimate ($\$350,000 - \$70,000 = \$280,000$) will be shown in CA-IR-447.

- b. As discussed in HELCO's response to subpart a, ROW clearing is still in progress and there are no proposals that have been solicited or contracted to date, except for the clearing work that is in progress. To date, HELCO has committed to spend \$76,680 and \$55,173 clearing the Puueo and Waiau ROWs, respectively for a total of \$131,853 based on the work authorizations in place. Actual payments to-date are \$4,514.32 for Puueo and \$1,195.66 for

Waiau ROW clearing work. Due to a lag in billing, the contractor has been advised to improve its billing procedure and to bill HELCO on a timely basis. See Attachment 1 for a copy of the General Services Master Agreement between HELCO and Asplundh Tree Expert Co. (contractor), and Attachment 2 for copies of work authorization forms authorizing the contractor to clear the Waiau and Puueo ROWs.

SERVICE ORDER NO. _____
CONTRACT NO. DMS-100

GENERAL SERVICES MASTER AGREEMENT

THIS GENERAL SERVICES MASTER AGREEMENT (the "Master Agreement") is made on August 10, 2004, by and between HAWAII ELECTRIC LIGHT COMPANY, INC. (hereinafter "Company"), a Hawaii corporation, whose principal place of business and address is 1200 Kilauea Avenue, Hilo, Hawaii 96720-4295, and whose business mailing address is P. O. Box 1027, Hilo, Hawaii 96721-1027, and Asplundh Tree Expert Co. (hereinafter "Contractor"), whose principal place of business is 70 Kaneohe Bay Drive, and whose mailing address is Kailua, HI 96734, doing business in Hawaii.

W I T N E S S E T H :

WHEREAS, Company is in the business of generation, transmission, and distribution of electrical power on the Island of Hawaii, State of Hawaii; and

WHEREAS, Company requires certain work to be accomplished from time to time in order to maintain reliable electrical power for its customers; and

WHEREAS, Contractor is in the business of performing work such as that needed by Company; and

WHEREAS, Contractor represents that it is equipped and has the expertise necessary to perform the particular work required under this Agreement,

NOW, THEREFORE, in consideration of these premises and of the mutual promises herein contained, Company and Contractor hereby agree that Contractor will perform contracting work for Company under the following terms and conditions:

I. APPLICATION OF THE MASTER AGREEMENT

The purpose of this Master Agreement is to set forth the terms, conditions and administrative procedures applicable to the services or work provided by Contractor for or on behalf of the Company under specific Work Authorizations provided for hereunder.

II. SPECIFIC CONTRACTS

2.1 Request for Quote - During the term of this Master Agreement, the Company may from time to time issue a Request for Quote in the form of Attachment A, Section I for certain Work to be performed by Contractor under the terms and conditions contained herein.

2.2 Contractor's Proposal - If Contractor desires to do the requested Work, it will fill out Section II of Attachment A, and propose a price or price structure for the Work. Such a price quote shall constitute an affirmative representation by Contractor that it is equipped and has the expertise necessary to perform the Work requested in the Request for Quote.

2.3 Work Authorization - If Company desires to have the Work done by Contractor, it will issue a Work Authorization by executing Section III of Attachment A.

2.4 Specific Contract - Each executed Work Authorization shall constitute a specific contract, which shall be governed by the particular Work Authorization terms and this Master Agreement. In addition, Company's request for Work under a Verbal Work Authorization and the start of Work thereunder by Contractor shall also constitute a specific contract and all Work thereby performed shall be governed by the terms and conditions of this Master Agreement.

2.5 Authority to Issue - The following are the only individuals authorized to sign Section III of Attachment A and thereby issue Work Authorizations hereunder and may do so only up to the stated limits for each Work Authorization:

Distribution Manager- (Up to \$100,000)
Forester - (Up to \$5,000)

2.6 Verbal Work Authorizations - In emergency or other similar time-critical situations, Work may be authorized by Company under a verbal Work Authorization by an individual listed in Section 2.5 above; provided that a written Work Authorization (Attachment A) is completed for such Work within 24 hours of the start of such Work; and, provided further, that Contractor invoices Company no more than the amount it would charge its best customer for the same Work.

III. SCOPE OF WORK

3.1 Work Description - Contractor agrees to furnish all labor, tools, materials, equipment, transportation, and supervision necessary to complete the work and tasks described in Section I of each executed Work Authorization ("Work").

3.2 Schedule of Work - The Work in each Work Authorization shall start and be completed as provided therein.

3.3 Term of Master Agreement - This Master Agreement shall terminate on 08/01/07; provided, however, that said Master Agreement shall continue to be effective as to any outstanding Work under a Work Authorization issued prior to that date.

IV. COMPENSATION

4.1 Price - Compensation for Work performed and expenses incurred under each Work Authorization shall be as set forth in such Work Authorization.

4.2 Invoicing - For each Work Authorization, Contractor will submit its invoice for all Work rendered as set forth therein or on a monthly basis (the "billing period"). Such invoice shall be in a form approved by Company and shall at a minimum show (i) the total hours of Work for the applicable billing period by each Contractor employee; (ii) the hourly rate for each Contractor employee; (iii) a description of the Work performed; and (iv) an itemized list of all allowable expenditures made during the month. Upon request by Company, Contractor shall provide supporting documentation, including but not limited to invoices and receipts, as evidence of such expenditures. The invoice shall reference the Company's Designated Representative, the Company's purchase or service order number, if any, the Contract Number, the Work Authorization Number and any additional information required by the Work Authorization. All invoices should be addressed:

Hawaii Electric Light Company, Inc.
P.O. Box 2750

Honolulu, Hawaii 96840-0001

Attention: Accounts Payable

Service Order No. _____

Contract No. DMS-100

NOTE: Do not include the name of the Company's Designated Representative in the address.

The ORIGINAL invoice, without attachments, must be sent directly to the Accounts Payable address listed above. ALL REQUIRED SUPPORTING DOCUMENTATION must be sent SEPARATELY to the Company's Designated Representative. Failure to follow this procedure may cause a delay in payment.

4.3 Payments - Payment of a properly submitted invoice will be made within thirty (30) days after receipt and approval by Company; provided, however, that Company may withhold from each such payment a retention of ten percent (10%) of the amount invoiced for hourly Work, until such time as the Final Payment is made.

4.4 Final Payment - Final payment of all remaining amounts due Contractor under a particular Work Authorization, including any retention, shall be made within sixty (60) days after all Work is completed, accepted by Company, and a proper final invoice and request for final payment and release of claims form submitted; provided, however, that payment shall be made within thirty (30) days if Company is satisfied by bond or otherwise that there are no outstanding claims against the Work.

4.5 Withholding of Payments; Set-off - All payments, including the final payment, are subject to adjustment during or after termination of the Work on the basis of any final accounting which may be made by Company. Company may withhold from any payment, including the final payment: (1) any amount incorrectly invoiced; (2) any amount in dispute either because Company has found the invoice excessive, or the Work performed unacceptable; or (3) an amount sufficient to completely protect Company from any loss, damage or expense arising out of assertions by other parties of any claim or lien against Company because of Contractor's performance of a Work Authorization. Company further reserves the right to set-off any amounts due from Contractor, or any affiliated company of Contractor, to Company, against any amounts payable at any time by Company in connection with this Agreement. "Affiliated company" refers to any corporation, firm or association that controls, is controlled by or is under common control with Contractor.

V. STATUS OF THE PARTIES

5.1 Independent Contractor - Contractor will act solely as an independent contractor of Company, and not as Company's agent or servant for any purpose. All employees of Contractor will work under the supervision of Contractor and not act as Company's agents or servants for any purpose.

5.2 Subletting or Assigning Contract - Contractor shall not assign nor sublet any portion of the Work under a Work Authorization without first submitting the proposed subcontract or assignment to Company's Designated Representative and receiving written consent from such Representative to subcontract or assign, which consent may be granted or withheld in Company's sole discretion. A request to sublet or assign must contain the name and location of individuals or firms to whom Work will be transferred, information on the qualifications and experience of those individuals or firms to perform the transferred Work, and an estimate of the cost of Work to be performed by the subcontractor or assignee. The general terms and conditions of this Master Agreement and any amendment regarding the Work to be performed must be incorporated into and attached to any subcontract or assignment. Consent to subletting or assignment will not relieve Contractor of responsibility for the performance of the Work in accordance with the terms and conditions of the Work Authorization in question, and any amendments thereto.

VI. POINTS OF CONTACT

6.1 Company's Designated Representative - A "Company's Designated Representative" shall be appointed for each Work Authorization. Such Representative shall be the point of contact for and have the authority to speak on behalf of Company concerning all matters related to the Work Authorization, except that he shall not have the authority to amend this Master Agreement or the Work Authorization.

6.2 Contractor's Designated Representative - A "Contractor's Designated Representative" shall be appointed for each Work Authorization. Such Representative shall be the point of contact for and have the authority to speak on behalf of Contractor concerning all matters related to the Work Authorization, except that he shall not have the authority to amend this Master Agreement or the Work Authorization.

VII. PERFORMANCE STANDARDS

7.1 Performance Standards - In selecting employees to undertake the Work under a Work Authorization, Contractor shall select only those persons who are qualified by the necessary education, training and experience to provide high quality performance of the particular Work for which each such employee is responsible. Contractor shall accomplish all Work in a professional manner and to the reasonable satisfaction of Company. Contractor's personnel shall exercise that degree of skill and care required in accordance with the generally accepted standards for such Work in Contractor's field.

7.2 Technological Developments and Remedies - Contractor shall promptly advise Company of all reasonably available technological advances and remedies which are known or become known to Contractor over the course of performance of its obligations under the applicable Work Authorization which may result in the Work having added value (i.e. better performance, design, material, longer useful life, etc.) to Company. Should Company elect to incorporate such advances it shall do so pursuant to a Change Order mutually agreeable to the parties.

7.3 Materials and Equipment - All materials and equipment used by Contractor in the performance of Work under a Work Authorization shall be guaranteed by Contractor to be fit for the specific purpose for which the materials and equipment are used.

7.4 Correction of Defective or Substandard Work - Contractor acknowledges its absolute responsibility for insuring that the materials, equipment and procedures used in the performance of each Work Authorization are sufficient to satisfactorily accomplish the Work, and that review and approval by Company of any drawings, specifications or other documents prepared by Contractor in the performance of the Work shall not relieve Contractor or any of its subcontractors or vendors of its professional responsibility for the Work. Contractor agrees that it shall promptly correct or replace without expense to Company all defective or substandard materials, equipment or workmanship furnished by Contractor and correct any failures of materials, equipment or workmanship to meet the standards established in this Article VII. Contractor shall make such corrections of defective Work upon written notice thereof anytime such defects appear within one (1) year of Company's acceptance of the Work performed hereunder, or other discovery period as specified in the Work Authorizations, even after the termination of this Master Agreement. Contractor shall also remedy and make Company whole with respect to any consequences of Contractor's defective or substandard work.

7.5 Right to Reject - Due to the critical nature of Company's operations, Contractor agrees that if Company, in its sole discretion and after reasonable consultation with Contractor, determines that any Contractor employee provided under a Work Authorization is unsuitable for the performance of the Work, or that the continued presence of such employee on Company property is not consistent with the best interests of Company, then in such an instance Company may request that Contractor remove such employee from the Work and Contractor shall forthwith comply with this request. Contractor will then immediately replace such employee with an employee who fully meets the standards under this Master Agreement and will do so at no cost to Company.

VIII. INSURANCE AND INDEMNITY

8.1 Workers' Compensation - Contractor and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full force at all times during the term of this Master Agreement, Workers' Compensation, Temporary Disability, and other similar insurance required by state or federal laws. In the event that Contractor fails to maintain such insurance as required by law, Contractor acknowledges and agrees that it will not seek or be entitled to any coverage under Owner's insurance. Permissible self-insurance will be acceptable subject to submission of a copy of appropriate governmental authorization and qualification by Contractor.

In addition, Contractor and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full force at all times during the term of this Master Agreement, Employers Liability insurance with minimum limits for bodily injury from accident of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) - each accident; for bodily injury from disease of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) - each employee; and for bodily injury from disease of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) - each policy limit; or other minimum limits as specified in the Work Authorizations.

If there is an exposure or injury to Contractor's employees under the U.S. Longshoremen's and Harbor Workers' Compensation Act, the Jones Act or other laws, regulations or statutes applicable to maritime employees, coverage shall be included for such injuries or claims.

8.2 Commercial General Liability Insurance - Contractor and anyone acting under its direction or control or on its behalf

shall at its own expense procure and maintain in full force at all times during the term of this Master Agreement, Commercial General Liability insurance with a bodily injury and property damage combined single limit of liability of at least TWO MILLION DOLLARS (\$2,000,000) or other minimum limits as specified in the Work Authorizations for any occurrence. Such insurance will include coverage in like amount for products/completed operations, contractual liability, and personal and advertising injury. "Claims made" policies are not acceptable.

8.3 Automobile Liability Insurance - Contractor and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full effect at all times during the term of this Master Agreement, Automobile Liability insurance with a bodily injury and property damage combined single limit of at least ONE MILLION DOLLARS (\$1,000,000) or other minimum limits as specified in the Work Authorizations per accident.

8.4 Contractor's Pollution Liability Insurance and/or Asbestos Abatement Liability Insurance and/or Lead Abatement Liability Insurance - In the event that Company so specifies or as Contractor may determine based upon Contractor's assessment of the Work, if the Work involves Pollution Cleanup Services, Asbestos Abatement and/or Lead Abatement, the Contractor shall provide proof of insurance coverage as applicable with a combined single limit of at least ONE MILLION DOLLARS (\$1,000,000) per occurrence or other minimum limits as specified in the Work Authorizations.

8.5 Marine Insurance - If Contractor and anyone acting under its direction or control or on its behalf charters a marine vessel for performance of this Master Agreement, Contractor shall first provide to the Company proof of Charterers Legal Liability Insurance to be in effect during the term of the charter and insuring liabilities arising out of charter agreements on form CL 345 N/E or equivalent, with limits of liability of at least FIVE MILLION DOLLARS (\$5,000,000) or other minimum limits as specified in the Work Authorizations.

8.6 Waiver of Subrogation - Contractor and anyone acting under its direction will cause its insurers (except for Workers' Compensation insurers) to waive all rights of subrogation which Contractor or its insurers may have against Company, Company's agents, or Company's employees.

8.7 Company as Additional Insured - Insurance policies (except Workers' Compensation and automobile insurance) providing the insurance coverage required in this Article will name

Company, Company's agents, or Company's employees as additional insureds. Coverage must be primary in respect to the additional insured. Any other insurance carried by the Company will be excess only and not contribute with this insurance.

8.8 Certificates of Insurance - Within ten (10) days of the date of this Master Agreement, Contractor shall file with the Company's Designated Representative certificates of insurance certifying that each of the foregoing insurance coverages is in force, and further providing that the Company will be given thirty (30) days written notice of any material change in, cancellation of, or intent not to renew any of the policies. Receipt of any certificate showing less coverage than requested is not a waiver of the Contractor's obligation to fulfill the requirements.

8.9 Indemnity - Contractor and anyone acting under its direction or control or on its behalf shall indemnify, defend and hold harmless Company from and against all losses, damages, claims and actions, and all expenses incidental to such losses, damages, claims or actions, including but not limited to reasonable attorneys' fees and costs, based upon or arising out of damage to property or injuries to persons (including death), or other tortious acts caused or contributed to by the negligence, gross negligence, willful misconduct or other acts or omissions of the Contractor or anyone acting under its direction or control or in its behalf in the course of its performance under each Work Authorization; provided Contractor's aforesaid indemnity and hold harmless obligation shall not be applicable to any liability based upon the sole negligence, gross negligence or willful misconduct of Company.

IX. STATUS OF MATERIALS AND INFORMATION

9.1 Ownership of Materials - All reports, correspondence, documents and other information relating to the Work are exclusively Company's property and are to be considered as proprietary and confidential to Company. This includes all documents and information prepared or developed by Contractor in the performance of its Work hereunder. All copies of all such materials relating to the Work must be returned to Company upon completion of the Work and before final payment will be made.

9.2 No Dissemination - Contractor may not publish, release, disclose, or disseminate to anyone other than Company employees the results of any Work performed or any information obtained through or from Work performed hereunder without prior written approval of an officer of the Company.

9.3 Trade Secrets - Materials which are reviewed by Contractor in the course of each Work Authorization may contain trade secrets which are the property of Company or which have been purchased or leased for use by Company. Contractor may not reveal any trade secret material to any persons in any form and may not use the material itself for any purpose.

X. TERMINATION FOR CAUSE

10.1 Conditions Allowing Termination - If any of the following conditions occur during the term of this Master Agreement, then in such case, Company shall have the right to terminate the Master Agreement and all Work Authorizations thereunder as provided in this Article:

- (a) Contractor fails or is unable to perform its obligations under the Master Agreement or a Work Authorization to the reasonable satisfaction of Company;
- (b) Contractor becomes involved in a labor problem which in the opinion of Company unacceptably impedes or slows down Work under a Work Authorization;
- (c) Contractor fails to commence correction of defective Work immediately after notification of defect and to continuously and vigorously pursue correction of defect until the Work is completed to the full satisfaction of Company;
- (d) Contractor makes a general assignment for the benefit of its creditors;
- (e) Contractor has a receiver appointed because of insolvency; or
- (f) Contractor files bankruptcy or has a petition for involuntary bankruptcy filed against it.

Termination of this Master Agreement shall automatically result in termination of all outstanding Work Authorizations.

10.2 Notice Required Before Termination - Before terminating a Work Authorization or the Master Agreement for cause, Company shall give written notice to Contractor of the existence of one

of the above conditions allowing termination for cause and of Company's intention to exercise its termination rights if the condition is not corrected to the satisfaction of Company within fifteen (15) days of such notice.

10.3 Contractor's Right to Correct Condition - Upon receipt of Company's notice of intent to terminate for cause, Contractor shall have fifteen (15) days in which to correct the noted condition to the satisfaction of Company, or, if appropriate, to provide substitute Work which meets all the requirements of the applicable Work Authorization and the Master Agreement.

10.4 Company's Rights Upon Termination - If Contractor fails to correct the noted condition within fifteen (15) days, Company may terminate the Work Authorization or the Master Agreement, or both and secure such substitute Work as it deems necessary to complete the Work under the Work Authorization. In the event Company acquires substitute Work under this provision, Contractor agrees to pay Company upon demand, the difference between what the substitute Work actually costs Company and what Contractor would have been paid had it completed the Work itself. This provision shall survive termination of each Work Authorization and the Master Agreement.

XI. TERMINATION FOR CONVENIENCE

11.1 Company's Rights - Notwithstanding Article X above, Company shall have the right to terminate a Work Authorization or the Master Agreement or both at any time for Company's convenience, which shall include any reason or no reason at all, by giving written notice of such to Contractor. Termination of the Master Agreement shall automatically result in termination of all outstanding Work Authorizations. Upon receiving notice of termination, Contractor shall discontinue the Work on the date and to the extent specified in the notice and place no further orders for services except as needed to continue any portion of the Work that was not terminated. Contractor shall also make every reasonable effort to cancel, upon terms satisfactory to Company, all orders or subcontracts related to the terminated Work.

11.2 Termination Prior to Commencement of Work - If a Work Authorization or the Master Agreement is terminated prior to Contractor's having commenced any Work or preparation for Work, no payment shall be made to Contractor.

11.3 Termination After Commencement of Work - If a Work Authorization or the Master Agreement is terminated for Company's

convenience after Contractor has commenced any Work, mobilization or other off-site activities under a Work Authorization, Contractor will be paid its actually incurred costs, including administrative and general overhead costs and demobilization costs, determined in accordance with generally accepted accounting principles consistently applied, plus an amount equal to ten percent (10%) of those costs to account for profit; provided that, if compensation under a Work Authorization is on a time and materials basis, Contractor will be compensated at the rates and profit level specified in the Work Authorization for Work actually accomplished prior to the notice of termination. Notwithstanding the above, Company shall not pay for time, and/or costs which, as determined solely in Company's reasonable discretion, are excessive, given the total Work actually completed prior to notice of termination.

11.4 Contractor's Duty to Mitigate - Contractor agrees that it has an affirmative duty to mitigate all damages to it upon termination of a Work Authorization or the Master Agreement for convenience of Company.

XII. FORCE MAJEURE

12.1 Excuse of Performance - Notwithstanding anything in this Master Agreement to the contrary, neither party shall be liable nor responsible for failure to carry out any of its obligations under a Work Authorization caused by Force Majeure. A party rendered unable to fulfill any obligation under this Master Agreement by reason of Force Majeure shall make reasonable efforts to remove such inability in the shortest possible time, and the other party shall be excused from performance of its obligations until the party relying on the Force Majeure shall again be in full compliance with its obligations under the Master Agreement and the affected Work Authorization hereunder.

12.2 Definition - The term "Force Majeure" as used herein shall mean any cause beyond the control of the party affected, and which by reasonable efforts the party affected is unable to overcome, including without limitation the following: acts of God; fire, flood, landslide, lightning, earthquake, hurricane, tornado, storm, freeze, volcanic eruption or drought; blight, famine, epidemic or quarantine; strike, lockout or other labor difficulty; act or failure to act of the other party; theft; casualty; war; invasion; civil disturbance; terrorist acts; explosion; acts of public enemies; or sabotage.

XIII. RESPONSIBILITY FOR WORK

13.1 Risk of Loss During Work - Contractor is responsible for and shall bear all risk of loss or damage to Work, and all materials, tools and equipment delivered to the Work site, until completion and final acceptance of Work by Company, unless the loss or damage results solely from the negligence of Company. Company is not responsible for any loss or damage to the Work, or to materials, tools and equipment of Contractor resulting from a tortious action of any other contractor. Contractor shall look to such other contractor for any right or relief in these cases.

13.2 Precautions Against Damage - Contractor shall be responsible for taking all precautions necessary to prevent damage or injury to the work of Contractor, Company, or its contractors, and to the property of Contractor, Company, other contractors, or any of their employees, and members of the general public. These measures shall include, but not be limited to, laying drop cloths, constructing shields and guard fences, and any other precautionary measures which may be warranted.

13.3 Cleanup - Contractor shall be responsible for keeping the area where it employees are working clean and for removing all waste or debris upon completion of the Work. If Contractor fails or refuses to maintain a clean Work area, Company shall perform or arrange to have performed a cleanup of the area. If Company incurs any costs performing cleanup of Contractor's Work, that cost times a factor sufficient to cover Company's then applicable administrative and general overhead costs shall be paid to Company or may be deducted by Company from any amount owed to Contractor.

XIV. LAWS, REGULATIONS AND PUBLIC ORDINANCES

14.1 Compliance - Contractor shall comply with federal, state, and local statutes, regulations and public ordinances of any nature governing the Work, including without limitation, those statutes specifically referred to in this Article. In addition, Contractor, at its expense, shall obtain any and all licenses and permits required for the performance of the Work. Contractor shall indemnify and defend Company from any liability, fines, damages, costs, or expenses arising from Contractor's failure to comply with this Article.

14.2 Taxes - Contractor assumes exclusive liability for all contributions, taxes or payments required to be made because of persons hired, employed or paid by Contractor by the federal and state Unemployment Compensation Act, Social Security Acts and all

amendments, and by all other current or future acts, federal or state, requiring payment by the Contractor on account of the person hired, employed, or paid by Contractor for Work performed under this Master Agreement. Sales, use and excise taxes applicable to the value or use of any property incorporated, furnished, or otherwise supplied by Contractor shall be stated separately from the price or rates specified in Article IV (COMPENSATION), and shall not be included in any computation of profit allowed by this Contract. Contractor assumes exclusive liability for all such taxes charged or chargeable upon any such goods or materials supplied by Contractor pursuant to each Specific Contract.

14.3 Safety and Health Regulations - Contractor shall comply with all federal, state and local laws and regulations pertaining to health, safety, sanitary facilities, and waste disposal. Contractor shall meet all requirements of the Occupational Safety and Health Act of 1970 (OSHA) including all amendments. Contractor shall also comply with any standards, rules, regulations and orders promulgated under OSHA and particularly with the agreement for State development and enforcement of Occupational Health and Safety Standards as authorized by Section 18 of the Act.

14.4 Equal Employment Opportunity - (Applicable to all contracts of \$10,000 or more in the whole or aggregate. 41 CFR 60-1.4 and 41 CFR 60-741.5(a).) Contractor is aware of and is fully informed of Contractor responsibilities under Executive Order 11246 (reference to which include amendments and orders superseding in whole or in part) and shall be bound by and agrees to the provisions as contained in Section 202 of said Executive Order and the Equal Opportunity Clause as set forth in 41 CFR 60-1.4 and 41 CFR 60-741.5(a), which clauses are hereby incorporated by reference.

14.5 Employment of Disabled Veterans and Veterans of the Vietnam Era - (Applicable to all contracts of \$10,000 or more in the whole or aggregate. 41 CFR 60-250.4 and 41 CFR 60-741.5.) Contractor agrees that it is and will remain in compliance with the rules and regulations promulgated under The Vietnam Era Veterans Readjustment Assistance Act of 1974, The Affirmative Action Clause set forth in 41 CFR 60-250.4, the Rehabilitation Act of 1973 and the Equal Opportunity Clause set forth in 41 CFR 60-741.5, which clauses are incorporated by reference herein.

14.6 Drawings and Specifications - It is the intent of Company to have all drawings and specifications for the Work comply with all applicable statutes, regulations, general orders of the State of Hawaii, Company Tariff and ordinances. If

Contractor discovers any discrepancy or conflict between the drawings and specifications and applicable legal requirements, Contractor shall immediately report the problem in writing to Company's Designated Representative for the applicable Work Authorization.

XV. MISCELLANEOUS

15.1 Patents and Copyrights - Contractor agrees that in performing Work under each Work Authorization, it will not use any process, program, design, device, or material which infringes on any United States patent or copyright or any trade secret agreement. Contractor agrees to indemnify, defend and hold harmless Company from and against all losses, damages, claims, fees and costs, including but not limited to reasonable attorney's fees and costs, arising from or incident to any suit or proceeding brought against Company for patent, copyright or trade secret infringement arising out of Contractor's Work. Company shall promptly notify Contractor of any such suit or proceeding and shall assist Contractor in defending the action by providing any necessary information.

15.2 Security - Contractor and Contractor's employees who perform Work under each Work Authorization shall comply with the security practices and procedures prescribed by Company to cover any Company property where Work may be performed. Contractor shall advise its employees of these practices and procedures and secure their consent to abide by these procedures. Company will make a copy of these practices and procedures available to Contractor upon request.

15.3 Amendments - This Master Agreement and any Work Authorization issued hereunder may be amended or supplemented by and only by written instrument duly executed by each of the parties.

15.4 Severability of Provisions - In the event a court or other tribunal of competent jurisdiction at any time holds that any provision of this Master Agreement is invalid, the remainder of this Master Agreement shall not be affected thereby and shall continue in full force and effect.

15.5 Entire Agreement - This Master Agreement and any executed Work Authorization hereunder shall constitute the entire understanding between the parties, superseding any and all previous understandings, oral or written, pertaining to the subject matter contained herein. The parties have entered into this Master Agreement in reliance upon the representations and

mutual undertakings contained herein and not in reliance upon any oral or written representation or information provided to one party by any representative of the other party.

15.6 Applicable Law/Forum - This Master Agreement and all Work Authorizations hereunder are made under and shall be governed by and construed in accordance with the laws of the State of Hawaii. Each party agrees and consents that any dispute arising out of this Master Agreement, however defined, shall be brought in the State of Hawaii in a court of competent jurisdiction, provided, however, that Company, at its option, may elect to submit any such dispute to binding arbitration pursuant to the arbitration rules of the American Arbitration Association then in effect.

15.7 No Waiver - The failure at any time of either party to enforce any of the provisions of this Master Agreement or any Work Authorization, or to require at any time performance by the other party of any of the provisions thereof, shall in no way be construed to be a waiver of such provisions, nor in any way construed to affect the validity of this Master Agreement or any Work Authorization or any part hereof, or the right of any party thereafter to enforce each and every such provision.

15.8 Access to Records - Upon request, Contractor shall make available for inspection and audit by Company in Honolulu, Hawaii any and all records and/or documents relating to Work performed under this Master Agreement during the performance of the Work and for a period of up to two (2) years from the completion of all Work under a Work Authorization. The right to audit shall not extend to the derivation of overhead costs.

15.9 Regulatory Approvals - This Master Agreement shall be contingent upon any and all required governmental and regulatory approvals, including those of the Public Utilities Commission.

15.10 Gender and Number - The terms "Company" and "Contractor," as and when used herein, or any pronouns used in place thereof, shall mean and include the masculine, feminine and neuter, the singular or plural number, individuals, partnerships, trustees or corporations and their and each of their respective successors, heirs, personal representatives, successors in trust and assigns, according to the context thereof. All covenants and obligations undertaken by two or more persons shall be deemed to be joint and several unless a contrary intention is clearly expressed elsewhere herein.

15.11 Attorneys' Fees and Costs - If Contractor's actions arising out of or relating to this Contract cause Company to

retain counsel to assist it in resolving the matter in dispute or if Company is forced to pursue legal action against Contractor to enforce the terms and conditions of this Contract, then Company shall be entitled to its attorneys' fees and costs incurred therein.

15.12 Federal and State Laws, Permits and Regulations - The articles purchased and the work performed hereunder shall conform to and be in compliance with all applicable laws, rules, and regulations (including the Occupational Safety and Health Act of Hawaii and all amendments thereto) and Contractor shall indemnify, defend and hold harmless Company from any and all liability, fines, and expenses, including attorneys' fees, arising from Contractor's failure to do so. In addition, Contractor agrees to perform the applicable obligations imposed by the equal opportunity and affirmative action clauses for minorities and females. (41 CFR 60-1.4), for the disabled (41 CFR 60-741.4), and for veterans (41 CFR 60-250.4), as amended.

15.13 Survival of Obligations - All defense, hold harmless and indemnity obligations hereunder shall survive termination of this Agreement.

XVI. COUNTERPARTS CLAUSE

The parties agree that this Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which shall together constitute one and the same instrument binding all parties notwithstanding that all of the parties are not signatories to the same counterparts. For all purposes, duplicate unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

IN WITNESS WHEREOF, the parties hereto have caused this Master Agreement to be signed by appropriate representatives of each as of the date indicated.

HAWAII ELECTRIC LIGHT COMPANY, INC.
("Company")

DATE: 11 Aug 2004

By *Dr. H. H. H.*
Its PRESIDENT

DATE: 8-11-04

By *P. R. F.*
Its Assistant Treasurer

Asplundh Tree Expert Co.
("Contractor")

DATE: 8-10-04

By *R. R.*
Its Manager

WORK AUTHORIZATION NO. _____
UNDER PURCHASE ORDER NO. _____/CONTRACT NO. DMS-100

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated _____, 20__, by and between _____ ("Contractor") and Hawaii Electric Light Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work:

Dated: _____
_____ Company

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty

Section 7.4 - _____ year discovery period for defects

Employers' Liability

Section 8.1 - \$ _____ per each accident
\$ _____ for bodily injury from disease
- each employee
\$ _____ for bodily injury from disease
- each policy limit

Commercial General Liability

Section 8.2 - \$ _____ per occurrence
\$ _____ general aggregate

Automobile Liability

Section 8.3 - \$ _____ bodily injury/person
\$ _____ bodily injury/occurrence
\$ _____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or Lead Abatement Liability

Section 8.4 - \$_____ per occurrence

Marine

Section 8.5 - \$_____ per occurrence

II. Contractor's Proposal

Contractor hereby proposes to perform the Work described above in Section I, under said terms and conditions, for the following amount: _____.

Total estimated cost is _____. Total estimated manhours required is _____.

Work will begin no later than _____ and be completed on or before _____.

_____ will act as Contractor's Designated Representative during the performance of this Work.

Dated: _____

Contractor

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this Work Authorization shall be _____.

Dated: _____

Company

AMENDMENT NO. ____ TO AUTHORIZATION NO. _____

UNDER CONTRACT NO. DMS-100

Hawaii Electric Light Company, Inc. ("Company") and
____ (Contractor) agree to amend Authorization No.
____ of the General Services Master Agreement No. _____, dated
_____ as follows:

Previous total not-to-exceed amount \$ _____

for Authorization No. ____

Total (not-to-exceed) cost for \$ _____
Amendment No. ____ work

New total not-to-exceed amount for \$ _____
Authorization No. ____

_____ is the designated Company representative
for this work.

Except as provided herein, the terms of said Agreement shall
remain the same and are incorporated by reference herein.

Please sign both copies of this document and return both to
Hawaii Electric Light Company, Inc. We will endorse and return
one copy to you for your files.

THE ABOVE AMENDMENT IS ACCEPTED BY:

HAWAII ELECTRIC LIGHT COMPANY, INC.

By: _____ By: _____
Title: _____ Title: _____
Date: _____ Date: _____

By: _____
Title: _____
Date: _____

CONTRACTOR'S REQUEST FOR FINAL PAYMENT
AND RELEASE OF CLAIMS

TO: _____ [the "Company"]
FROM: _____ [the "Releasor"]
PROJECT: _____ [the "Project"]

Releasor does hereby request Final Payment in the amount indicated below. In consideration of the payment in full to the undersigned Releasor of such Final Payment and all progress payments due and payable to Releasor on account of labor, materials, equipment and supplies furnished by Releasor in the improvement of the real property ("Project") described above, Releasor does hereby release and waive all liens and claims which it now has, or may hereafter have, for furnishing such labor, materials, equipment and supplies. Such liens and claims shall include, but shall not be limited to: (1) any mechanic's or materialman's liens against the leasehold or fee simple title in and to such real property and Project; (2) any right to assert or claim any such mechanic's or materialman's liens; (3) any equitable liens; (4) any right to assert a claim under any labor or material payment bond, if any, issued for the benefit of Company or any other person or entity in connection with the Project; and (5) any right, if any, to assert a claim to any construction funds held by Company or its Banker. This release and waiver is for the benefit of, and may be relied upon by Company and the owner of the fee simple title in and to such real property (if not Company) and their respective successors and assigns.

For the foregoing consideration, Releasor further warrants and represents that it has fully and duly paid for all labor, materials, equipment and supplies used or furnished by it in connection with the Project to all persons or entities who have furnished labor or materials on the Project under it (including, without limitation, all subcontractors, lower level subcontractors, materialmen, and material supply houses), and hereby covenants and agrees to indemnify Company and the owner of the fee simple property (if not Company), and each of them, for and against any and all loss, liability, or expenses (including reasonable attorneys' fees) which may be sustained or incurred by any of them for any failure of Releasor to make such payments. Releasor has attached hereto copies of Lien Releases executed by each person or entity who has furnished labor or materials on the Project, evidencing the extent of payments made to date and any outstanding balance owed.

This Release does not impose or create any contractual duties or obligations on Company in favor of any subcontractor, materialman, supply house, or any other person or entity who is working for or has contracted with persons other than Company.

Dated: Honolulu, Hawaii, this _____ day of _____, 20____.

Name of Contractor/Releasor

By _____
Its

Amount Paid to Date: \$ _____

Final Payment Due: \$ _____

FINAL RELEASE AND WAIVER BY SUBCONTRACTOR
(OR SUB-SUBCONTRACTOR AND MATERIALMAN OR
SUPPLY HOUSE) OF MECHANIC'S LIEN AND CLAIMS

TO: _____ [the "Contractor"]
FROM: _____ [the "Releasor"]
PROJECT: _____ [the "Project"]

In consideration of the payment in full to the undersigned Releasor of all progress payments due and payable to Releasor for labor, materials, equipment and supplies furnished by Releasor in the improvement of the real property ("Project") described above, Releasor does hereby release and waive all liens and claims which it now has, or may hereafter have, for furnishing such labor, materials, equipment and supplies. Such liens and claims shall include, but shall not be limited to: (1) any mechanic's or materialman's liens against the leasehold or fee simple title in and to such real property and Project; (2) any right to assert or claim any such mechanic's or materialman's liens; (3) any equitable liens; (4) any right to assert a claim under any labor or material payment bond, if any, issued for the benefit of Contractor, Owner, or any other person or entity in connection with the Project; and (5) any right, if any, to assert a claim to any construction funds held by Contractor, Owner, or their Banker. This release and waiver is for the benefit of, and may be relied upon by Contractor and Owner under their Construction Contract and the owner of the fee simple title in and to such real property and their respective successors and assigns.

For the foregoing consideration, Releasor further warrants and represents that it has fully and duly paid for all labor, materials, equipment and supplies used or furnished by it in connection with the Project to all persons or entities who have furnished labor or materials on the Project under it (including, without limitation, all sub-subcontractors, lower level subcontractors, materialmen, and material supply houses), and hereby covenants and agrees to indemnify Contractor, Owner, and the owner of the fee simple property, and each of them, for and against any and all loss, liability, or expenses (including reasonable attorneys' fees) which may be sustained or incurred by any of them for any failure of Releasor to make such payments.

This Release does not impose or create any contractual duties or obligations on Contractor in favor of any sub-subcontractor, materialman, supply house, or any other person or entity who is working for or has contracted with persons other than contractor.

Dated: Honolulu, Hawaii, this _____ day
of _____, 20____.

Name of Subcontractor,
Sub-Subcontractor, or Materialman

By _____
Its

Amount Paid to Date: \$ _____

Balance Due: \$ _____

ACORD. CERTIFICATE OF INSURANCE		DATE (MM/DD/YY) 8/11/2004				
PRODUCER Aon Risk Services, Inc of PA One Liberty Place, Suite 1000 Philadelphia, PA 19103 <div style="text-align: right;">Region Code: 178</div>		THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. <div style="text-align: center;">INSURERS AFFORDING COVERAGE</div>				
INSURED Asplundh Tree Expert Co 708 Blair Mall Road Willow Grove, PA 190901784		INSURER A: LIBERTY MUTUAL FIRE INSURANCE COMPANY INSURER B: INSURER C: INSURER D: INSURER E:				
COVERAGES						
THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF SUCH POLICIES. THE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.						
CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCURRENCE <input checked="" type="checkbox"/> Broad Form Contractual <input checked="" type="checkbox"/> Owners & Contractors Protective GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC	RG2-631-004328-154	8/1/2004	8/1/2005	EACH OCCURRENCE	\$
					FIRE DAMAGE (Any One Ftg)	\$ 100,000
					MED EXP (Any One Person)	\$ 10,000
					PERSONAL & ADV INJURY	\$
					GENERAL AGGREGATE	\$
					PRODUCTS - COMP/OP AGG	\$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/>	AS2-631-004328-054 (AOS)	8/1/2004	8/1/2005	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
					BODILY INJURY (Per person)	\$
		AS2-631-004328-064 (OH)	8/1/2004	8/1/2005	BODILY INJURY (Per accident)	\$
					PROPERTY DAMAGE (Per accident)	\$
					AUTO ONLY - EA ACCIDENT	\$
					OTHER THAN EA ACC	\$
					AUTO ONLY: AGG	\$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/>					
	EXCESS LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION					
A	WORKERS COMPENSATION AND EMPLOYERS LIABILITY	WA7-63D-004328-014 (AOS)	8/1/2004	8/1/2005	<input checked="" type="checkbox"/> WC STATL TORY LIMITS <input type="checkbox"/> OTHER	
		WC7-631-004328-024 (WI,AK,ID,MT,OR)			E.L. EACH ACCIDENT	\$ 1,000,000
					E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
					E.L. DISEASE - POLICY LIMIT	\$ 1,000,000
	OTHER					
DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/RESTRICTIONS/SPECIAL ITEMS <div style="text-align: right;">-310943205</div>						
CERTIFICATE HOLDER HAWAII ELECTRIC LIGHT COMPANY, INC. P.O. BOX 1027 HILO, HI 96721-1027 ATTN: JULIANNE R. PAYNE			CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE: <i>Tony A. Johnson</i>			
ACORD 25-S (7/97) ACORD CORPORATION 1988						

Attachment A

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**THIS ENDORSEMENT, EFFECTIVE 12:01 A.M. 8/1/2004, FORMS FORMS OF POLICY
ROMSER NUMBER 004328-154 ISSUED TO THE ADDITIONAL TO THE COOPTIONAL UNDH
INSURERS OF CO..**

ADDITIONAL INSURED--DESIGNATED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART.

SCHEDULE

Name of Person or Organization:

-310943205

HAWAII ELECTRIC LIGHT COMPANY, INC
P.O. BOX 1027
HILO, HI 96721-1027
ATTN: JULIANNE R. PAYNE

WHO IS AN INSURED is amended to include as an insured the person or organization shown in the Schedule as an insured but only with respect to liability arising out of operations performed by:

or any of their subsidiary companies or premises owned by or rented to any of them.

It is further agreed that LIMITS OF INSURANCE applicable to this insurance are as follows:

GENERAL AGGREGATE LIMIT (other than completed operations)	\$2,000,000
COMPLETED OPERATIONS AGGREGATE LIMIT	\$2,000,000
PERSONAL ADVERTISING INJURY LIMIT	\$2,000,000
EACH OCCURRENCE LIMIT	\$2,000,000

Where required by written contract or permit this LIMITS OF INSURANCE are primary and non-contributory with any other insurance available to the person or organization shown in the Schedule.

Req 036962

W/E 8/5

CA-IR-343
DOCKET NO. 05-0315
ATTACHMENT 2
PAGE 1 OF 14

WORK AUTHORIZATION NO. WA-PR014461
UNDER PURCHASE ORDER NO. _____ / CONTRACT NO. 99T-2

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated Aug. 11, 2004, by and between Asplundh Tree Exp. Co. ("Contractor") and Hawaii Electric Light Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work:
Waiau Cathodic Protection-- (ground crew to assist surveyors with mapping pipeline) Also Establish TPA-1

Dated: _____
_____ Company

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty

Section 7.4 - _____ year discovery period for defects

Employers' Liability

Section 8.1 - \$ _____ per each accident
\$ _____ for bodily injury from disease
- each employee
\$ _____ for bodily injury from disease
- each policy limit

Commercial General Liability

Section 8.2 - \$ _____ per occurrence
\$ _____ general aggregate

Automobile Liability

Section 8.3 - \$ _____ bodily injury/person
\$ _____ bodily injury/occurrence
\$ _____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or Lead Abatement Liability

Section 8.4 - \$_____ per occurrence

Marine

Section 8.5 - \$_____ per occurrence

II. Contractor's Proposal

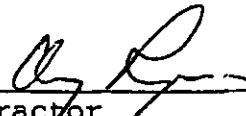
Contractor hereby proposes to perform the Work described above in Section I, under said terms and conditions, for the following amount: _____

Total estimated cost is ^{\$16,105.-} ~~T&M~~ Total estimated manhours required is _____.

Work will begin no later than _____ and be completed on or before _____.

_____ will act as Contractor's Designated Representative during the performance of this Work.

Dated: 7-19-06

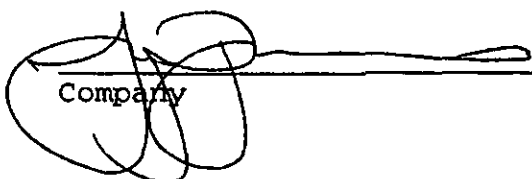


Contractor

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this Work Authorization shall be Rich Wlosinski_.

Dated: 7/12/06



Company

Kea 38214

WORK AUTHORIZATION NO. WA-PR014698
UNDER PURCHASE ORDER NO. _____ / CONTRACT NO. 99T-2

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated Aug. 11, 2004, by and between Asplundh Tree Exp. Co. ("Contractor") and Hawaii Electric Light Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work: Puueo Trestle #1 Remove vines from trestle.

12K

Dated: _____
_____ Company

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty

Section 7.4 - _____ year discovery period for defects

Employers' Liability

Section 8.1 - \$ _____ per each accident
\$ _____ for bodily injury from disease
- each employee
\$ _____ for bodily injury from disease
- each policy limit

Commercial General Liability

Section 8.2 - \$ _____ per occurrence
\$ _____ general aggregate

Automobile Liability

Section 8.3 - \$ _____ bodily injury/person
\$ _____ bodily injury/occurrence
\$ _____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or Lead Abatement Liability

Section 8.4 - \$ _____ per occurrence

Marine

Section 8.5 - \$_____ per occurrence

II. Contractor's Proposal

Contractor hereby proposes to perform the Work described above in Section I, under said terms and conditions, for the following amount: _____

Total estimated cost is T&M \$12,000. Total estimated manhours required is _____.

Work will begin no later than _____ and be completed on or before _____.

_____ will act as Contractor's Designated Representative during the performance of this Work.

Dated: 9-12-04

[Signature]
Contractor

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this Work Authorization shall be Rich Wlosinski.

Dated: 8/31/06

[Signature]
Company

Req 38213

CA-IR-343
DOCKET NO. 05-0315
ATTACHMENT 2
PAGE 5 OF 14

WORK AUTHORIZATION NO. WA-PRO14698-2
UNDER PURCHASE ORDER NO. /CONTRACT NO. 99T-2

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated Aug. 11, 2004, by and between Asplundh Tree Exp. Co. ("Contractor") and Hawaii Electric Light Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work: Puueo Penstock Area 1. (on Scott Greer property) To clear approx. 10' on the river side of pipe that is in use and 10' on mauka side of other pipe. The cost would be 15K-20K. The cost does not include any clean up, meaning no hauling of debris. All debris will be cut up and left on the sides/banking so as to not block the natural flow of any runoff.

Dated: _____
Company _____

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty
Section 7.4 - _____ year discovery period for defects

Employers' Liability
Section 8.1 - \$ _____ per each accident
\$ _____ for bodily injury from disease
- each employee
\$ _____ for bodily injury from disease
- each policy limit

Commercial General Liability
Section 8.2 - \$ _____ per occurrence
\$ _____ general aggregate

Automobile Liability

Section 8.3 - \$ _____ bodily injury/person
\$ _____ bodily injury/occurrence
\$ _____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or
Lead Abatement Liability

Section 8.4 - \$ _____ per occurrence

Marine

Section 8.5 - \$ _____ per occurrence

II. Contractor's Proposal

Contractor hereby proposes to perform the Work described above in Section I, under said terms and conditions, for the following amount: _____

17,060.- AD.

Total estimated cost is \$15K-20K Total estimated manhours required is _____.

Work will begin no later than _____ and be completed on or before _____.

_____ will act as Contractor's Designated Representative during the performance of this Work.

Dated: 9-19-06

By R. P. ATE
Contractor

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this Work Authorization shall be Rich Wlosinski.

Dated: 9/12/06

[Signature]
Company

WORK AUTHORIZATION NO. WA-PRO14698-1
UNDER PURCHASE ORDER NO. _____ / CONTRACT NO. 99T-2

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated Aug. 11, 2004, by and between Asplundh Tree Exp. Co. ("Contractor") and Hawaii Electric Light Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work: Puueo Penstock Area 2. (on Scott Greer property) To clear approx. 10' on the river side of pipe that is in use and 10' on mauka side of other pipe. The cost would be 20K-25K. Debris would be left on site, and out of the way of runoff.

Dated: _____
Company _____

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty

Section 7.4 - _____ year discovery period for defects

Employers' Liability

Section 8.1 - \$ _____ per each accident
\$ _____ for bodily injury from disease
- each employee
\$ _____ for bodily injury from disease
- each policy limit

Commercial General Liability

Section 8.2 - \$ _____ per occurrence
\$ _____ general aggregate

Automobile Liability

Section 8.3 - \$ _____ bodily injury/person

\$ _____ bodily injury/occurrence
\$ _____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or
Lead Abatement Liability

Section 8.4 - \$ _____ per occurrence

Marine

Section 8.5 - \$ _____ per occurrence

II. Contractor's Proposal

Contractor hereby proposes to perform the Work described
above in Section I, under said terms and conditions, for the
following amount: _____

\$ 21,000.- Act

Total estimated cost is \$20K-25K Total estimated manhours
required is _____.

Work will begin no later than _____ and be
completed on or before _____.

_____ will act as Contractor's Designated
Representative during the performance of this Work.

Dated: 9-19-06

[Signature]
Contractor

ARE

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is
authorized to perform the Work as proposed. Company's Designated
Representative for this Work Authorization shall be
Rich Wlosinski_.

Dated: 9/12/06

[Signature]
Company

Rea 38215

WORK AUTHORIZATION NO. WA-PR014698-3
UNDER PURCHASE ORDER NO. _____ / CONTRACT NO. 99T-2

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated Aug. 11, 2004, by and between Asplundh Tree Exp. Co. ("Contractor") and Hawaii Electric Light Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work: Remove banyan tree that is engulfing cement box (growing on top and over) covering valve on Puueo penstock.

Dated: _____
_____ Company

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty
Section 7.4 - _____ year discovery period for defects

Employers' Liability
Section 8.1 - \$ _____ per each accident
\$ _____ for bodily injury from disease
- each employee
\$ _____ for bodily injury from disease
- each policy limit

Commercial General Liability
Section 8.2 - \$ _____ per occurrence
\$ _____ general aggregate

Automobile Liability
Section 8.3 - \$ _____ bodily injury/person
\$ _____ bodily injury/occurrence

\$ _____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or
Lead Abatement Liability

Section 8.4 - \$ _____ per occurrence

Marine

Section 8.5 - \$ _____ per occurrence

II. Contractor's Proposal

Contractor hereby proposes to perform the Work described above in Section I, under said terms and conditions, for the following amount: _____.

Total estimated cost is T&M \$26,620.- Total estimated
manhours required is _____. [16K CUT TREE OFF BOX
101K CLEAN UP]

Work will begin no later than _____ and be
completed on or before _____.

_____ will act as Contractor's Designated
Representative during the performance of this Work.

/s/ Dated: 10-6-06

[Signature] ATE
Contractor

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is
authorized to perform the Work as proposed. Company's Designated
Representative for this Work Authorization shall be
Rich Wlosinski.

Dated: 9/27/06

[Signature]
Company

Rea 38216

WORK AUTHORIZATION NO. WA-PRO14698-4
UNDER PURCHASE ORDER NO. _____ / CONTRACT NO. 99T-2

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated Aug. 11, 2004, by and between Asplundh Tree Exp. Co. ("Contractor") and Hawaii Electric Light Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work: Remove trees/vegetation on exposed section 4 of Waiiau hydro pipe. Located at OK farms, lower portion of property bordering Scott Greerier property.

Dated: _____
_____ Company

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty

Section 7.4 - _____ year discovery period for defects

Employers' Liability

Section 8.1 - \$ _____ per each accident
\$ _____ for bodily injury from disease
- each employee
\$ _____ for bodily injury from disease
- each policy limit

Commercial General Liability

Section 8.2 - \$ _____ per occurrence
\$ _____ general aggregate

Automobile Liability

Section 8.3 - \$ _____ bodily injury/person
\$ _____ bodily injury/occurrence
\$ _____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or Lead Abatement Liability

Section 8.4 - \$_____ per occurrence

Marine

Section 8.5 - \$_____ per occurrence

II. Contractor's Proposal

Contractor hereby proposes to perform the Work described above in Section I, under said terms and conditions, for the following amount: _____

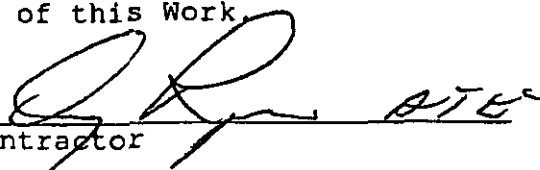
\$25,500.-T.M.

Total estimated cost is (T&M) \$30k-Est. Total estimated manhours required is _____.

Work will begin no later than _____ and be completed on or before _____.

_____ will act as Contractor's Designated Representative during the performance of this Work.

Dated: 10-16-04


Contractor

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this Work Authorization shall be Rich Wlosinski.

Dated: 10/19/06


Company

WORK AUTHORIZATION NO. WA-PRO14698-5
UNDER PURCHASE ORDER NO. _____ / CONTRACT NO. 99T-2

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated Aug. 11, 2004, by and between Asplundh Tree Exp. Co. ("Contractor") and Hawaii Electric Light Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work: Remove trees/vegetation on exposed section 5 of Waiiau hydro pipe. Area 5 located at OK farms, upper portion of property (just makai of trestle).

Dated: _____
_____ Company

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty

Section 7.4 - _____ year discovery period for defects

Employers' Liability

Section 8.1 - \$ _____ per each accident
\$ _____ for bodily injury from disease
- each employee
\$ _____ for bodily injury from disease
- each policy limit

Commercial General Liability

Section 8.2 - \$ _____ per occurrence
\$ _____ general aggregate

Automobile Liability

Section 8.3 - \$ _____ bodily injury/person
\$ _____ bodily injury/occurrence
\$ _____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or Lead Abatement Liability

Section 8.4 - \$ _____ per occurrence

Marine

Section 8.5 - \$ _____ per occurrence

II. Contractor's Proposal

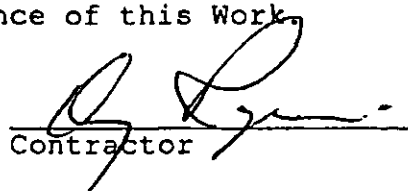
Contractor hereby proposes to perform the Work described above in Section I, under said terms and conditions, for the following amount: _____

Total estimated cost is (T&M) \$10k-15kEst. Total estimated manhours required is _____

Work will begin no later than _____ and be completed on or before _____

_____ will act as Contractor's Designated Representative during the performance of this Work


Dated: _____


Contractor

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this Work Authorization shall be Rich Wlosinski_.

Dated: _____


Company

CA-IR-344

Ref: HELCO-WP-510, pages 2 and 3; Response to CA-IR-2, HELCO T-5, Attachment 1B, Page 1; Budgeted Overhaul Costs.

For each of the numbered overhauls 1 through 10 on this Attachment 1B and each other overhauls projected in the 2006 test year forecast, please provide a reconciliation of the initially forecasted Labor and Non-labor charges, indicating how the various "Rate Case Adjustments" and "Rate Case Normalizations" are applicable to each line item and what amount of labor and non-labor expenses are proposed after all HELCO-proposed adjustments for rate case recovery.

HELCO Response:

For each of the numbered overhauls 1 through 10 on CA-IR-2, Attachment 1B, a reconciliation of the initially forecasted Labor and Non-labor charges are shown on Attachment 2 of CA-IR-255. The attachment also indicates how the various "Rate Case Adjustments" and "Rate Case Normalizations" are applicable to each line item as well as the expenses proposed after all related adjustments.

CA-IR-345

Ref: HELCO-WP-510, page 8; Normalized Cost Amounts for Overhauls.

For each of the listed "UNIT" overhauls on this schedule, please provide the following information:

- a. State all assumptions being made regarding the scope and frequency of "normalized" overhauls on the unit.
- b. Explain how the assumptions stated in the response to part (a) of this information request were translated into each of the "normalized" dollar amounts shown.
- c. Provide complete copies of all information relied upon to develop the estimated costs of overhaul activity for each listed unit, including but not limited to any vendor estimates, analyses of prior overhauls, price lists, quotations and service contracts that were relied upon.
- d. Explain the rationale for the "Reason" stated in the right column and provide copies of any supporting documentation for same.
- e. Provide complete copies of all documents associated with the "wp Ref" and "(14)" references next to the "Reason" column of information.

HELCO Response:

- a. Assumptions being made regarding the scope and frequency of "normalized" overhauls on HELCO units were discussed in HELCO T-5 (pages 43 to 59) as well as in response to HELCO CA-IR-1, CA-IR-2, CA-IR-56, CA-IR-57, CA-IR-58, CA-IR-254, CA-IR-255, CA-IR-257, and CA-IR-259.
- b. See IR responses referred to in subpart a.
- c. All information relied upon to develop the estimated costs of overhaul activity for each listed unit has already been provided. As discussed CA-IR-2, subpart c, estimates are mainly based on historical expenditures, and in subpart f, it was noted that no bids were used to derive the estimates.
- d. Refer to subpart a and b.

- e. The “wp Ref” “(14)” in the reason column is referring to the normalized overhaul schedule shown in HELCO-527, page 1.

CA-IR-346

Ref: HELCO Response to CA-IR-1, HELCO T-5, Attachment 2; Overtime Hours Assumptions.

Please provide complete copies of all workpapers, analyses, studies, reports, projections and other information relied upon to support the reasonableness of each of the overtime hour levels reflected in the labor forecast input sheets for production department RAs, as follows:

- a. Page 1, GA, "Per DG, use py OT amounts for budgeting;"
- b. Page 7, GC, "Based on Prior Years per Dgiovanni on 6/29/05", "Round to 730;"
- c. Page 11, GH, "Use 660 OT hrs;"
- d. Page 13, GK, "OT hrs based on 2004 year---use 775 hours;"
- e. Page 18, GM, "Based on Historical 2001-2004 Averages As Follows...Rounded 550;"
- f. Page 23, GP, "Based on Historical 2002-2004 Averages As Follows...Say 700 hrs OT;"
- g. Page 23, GW, "Based on 2003-2004 Average-Rounded 970;" and
- h. Page 30, GX, "Based on GP's Historical 2002-2004 Averages As Follows...Say 700 hrs.

HELCO Response:

For each of the subparts listed above (a through h), complete copies of all workpapers, analyses, studies, reports, projections and other information relied upon to support the reasonableness of each of the overtime hour levels reflected in the labor forecast input sheets for production department RAs were already provided. Refer to exhibits HELCO-536, 537, 538, 539 and 543, as well as responses to CA-IR-1, CA-IR-2 (Attachments 1A and 1B), CA-IR-61, CA-IR-62, CA-IR-68, CA-IR-69, CA-IR-71 and CA-IR-74.

CA-IR-347

Ref: T-7, page 7, line 24; Temporary Agency Workers.

- a. Please provide actual HELCO expenditures for temporary agency workers charged to Customer Accounts expenses by RA for each year from 1999 through 2005, and on a monthly basis for 2006 year-to-date.
- b. Explain how such amounts compare to temporary agency test year forecasted charges.

HELCO's Response:

- a. The information requested is attached on page 2 of this response.
- b. There are no amounts included in the 2006 test year estimates for temporary agency workers. As discussed in HELCO T-7, page 9, lines 3 – 8, it is not HELCO's Customer Services Department's practice to utilize contract service work to maintain daily operations, except for short-term instances where a position is vacant (whether from retirement, termination or transfer to another position within HELCO). As a result, contract service work is not budgeted.

Hawaii Electric Light Company, Inc.
Customer Accounts
Historical Temporary Agency Costs

<u>Temporary Agencies</u>	<u>RA</u>	<u>Work Description</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>YTD</u> <u>8/31/2006</u>
Altres	HCK	Cashier								7,426.47 *
Innovative Employment	HCH	Mail Clerk							13,223.91	6,254.25 *
Jobs Free Inc	HAK	Cashier		4,172.89	30,296.77	28,336.00	8,937.08	3,864.42		
Jobs Free Inc	HAK	Meter Reading			14,566.50					
Altres	HAW	Cashier			6,797.02	1,278.51				
Altres	HAR	Meter Reading			9,316.78					
Altres	HAS	Mail Clerk				12,980.86	12,119.81			
Chseco Consultants	HCC	Cashier	1,035.64							
Chseco Consultants	HCC	Mail Clerk	19,412.05							
Jobs Free Inc	HDK	Meter Reading	30,784.15							
Jobs Free Inc	HDK	Cashier	4,905.64							
			56,137.48	4,172.89	60,977.07	42,595.37	21,056.89	3,864.42	13,223.91	13,680.72
* <u>Month</u>				<u>Cashier</u>	<u>Mail Clerk</u>	<u>Total</u>				
Jan-06				0.00	1,008.75	1,008.75				
Feb-06				3,506.35	4,035.00	7,541.35				
Mar-06				3,920.12	1,210.50	5,130.62				
Apr-06				0.00	0.00	0.00				
May-06				0.00	0.00	0.00				
Jun-06				0.00	0.00	0.00				
Jul-06				0.00	0.00	0.00				
Aug-06				0.00	0.00	0.00				
				<u>7,426.47</u>	<u>6,254.25</u>	<u>13,680.72</u>				

CA-IR-348

Ref: HELCO-WP-702, page 4; WP-703 pages 4-6; WP-704 pages 4-6; Labor Hours Forecast.

- a. Please provide copies of the actual Pillar input sheets,
- b. Explain the process employed to populate the labor inputs by activity.
- c. Provide copies of all supporting documentation and calculations underlying the labor input hours by activity for each RA and labor class.

HELCO's Response:

- a. HELCO-WP-702, page 4, HELCO-WP-703, pages 4-6 and HELCO-WP-704, pages 4-6 are the actual input sheets used to populate Pillar. The note at the bottom of HELCO-WP-703, pages 4-6 and HELCO-WP-704, pages 4-6 (i.e. "Source: Per Pillar Input Sheet used for forecasting") was placed on the workpaper in error.

- b. HELCO-WP-702, page 4, Manager of Customer Services labor –

The Manager of Customer Services labor hour estimates are based on taking into consideration historical labor hours worked as well as work anticipated in the test year. The first step in the process was to assign labor hours for allowed vacation and holidays. Holidays are based on a set number of holidays and schedule and vacation is based on an employee's years of service with the Company. The next step was to determine any nonrecurring work anticipated in the test year. Nonrecurring work for the Manager of Customer Services included his involvement as a witness in the instant rate proceeding in the area of Customer Accounts and Administration and General expenses. This accounted for 292 estimated labor hours. The next step was to determine, based on past experience and the Manager's best estimate of work to be performed, the major activities that the

Manager was anticipated to spend time on. As shown on HELCO-WP-702, page 4, these activities included (1) Manage Past Due Accounts, (2) Manage and Resolve Billing & Account Problems, (3) Respond To Customer Inquiries and Service Requests, (4) Develop and Administer Business Plans, and (5) Manage and Provide Companywide Employee Communication. The remaining labor hour estimates are forecasted to other activities that the Manager anticipates spending time on. It should be noted that the labor hour estimates reflect the various activities that are anticipated time to spent on, which more than likely will be different to the actual labor hours recorded. This occurs as priorities may shift on a day to day basis.

HELCO-WP-703, page 4, East Hawaii Field Services labor –

The East Hawaii (Hilo) Field Services labor hour estimates are based on taking into consideration historical labor hours worked as well as work anticipated in the test year (including the need to schedule for five meter readers to read all of the East Hawaii meters each month). In addition, a historical overtime rate of 4.4% for the department was incorporated into the labor forecast, as shown on HELCO-709, page 2. As shown on HELCO-WP-701, page 17, these include ten personnel, including five meter readers and five field services personnel. The first step in the process was to assign labor hours for allowed vacation and holidays. Holidays are based on a set number of holidays and schedule and vacation is based on each employee's years of service with the Company. The next step was to determine any nonrecurring work anticipated in the test year. There were no nonrecurring work for the East Hawaii (Hilo) Field Services personnel. The next step was to determine, based on past experience and the department's best estimate of work to be performed, the major activities that the personnel were anticipated to spend time on.

As shown on HELCO-WP-703, page 4, these activities included (1) Read Billing Meters (for the meter reading positions), (2) Perform Meter Service Work (for the field representative positions), (3) Manage Past Due Accounts (for the field representative positions), (4) Perform Disconnects and Reconnects For None-Pay (for the field representative positions), and (5) Respond To Customer Inquiries and Service Requests (for the field representative positions). The remaining labor hour estimates are forecasted to other activities that the ten personnel anticipates spending time on. It should be noted that the labor hour estimates reflect the various activities that are anticipated time to spent on, which more than likely will be different to the actual labor hours recorded. This occurs as priorities may shift on a day to day basis.

HELCO-WP-703, page 5, West Hawaii (Kona) Customer and Field Services labor --

The West Hawaii (Kona) Customer and Field Services labor hour estimates are based on taking into consideration historical labor hours worked as well as work anticipated in the test year (including the need to schedule for three meter readers to read all of the Kona District meters each month). In addition, a historical overtime rate of 4.4% for the department was incorporated into the labor forecast, as shown on HELCO-709, page 2. As shown on HELCO-WP-701, page 17, these include twelve personnel, including three meter readers, four field services personnel, one cashier, and four customer accounts representatives . The first step in the process was to assign labor hours for allowed vacation and holidays. Holidays are based on a set number of holidays and schedule and vacation is based on each employee's years of service with the Company. The next step was to determine any nonrecurring work anticipated in the test year. There were no nonrecurring work for the East Hawaii (Hilo) Field Services personnel. The next step was

to determine, based on past experience and the department's best estimate of work to be performed, the major activities that the personnel were anticipated to spend time on. As shown on HELCO-WP-703, page 5, these activities included (1) Read Billing Meters (for the meter reading positions), (2) Perform Service Connection Work (for the field representative positions), (3) Manage Past Due Accounts (for the field representative and customer accounts representative positions), (4) Manage and Resolve Billing and Account Problems (for the customer accounts representative positions), (5) Respond To Customer Inquiries and Service Requests (for the customer accounts representative positions), (6) Maintain Customer Account Information (for the customer accounts representative positions), (7) Maintain Meter Information Work (for the field representative positions), (8) Process Payroll (for the customer accounts representative positions), and (9) Process Customer Payments (for the cashiering position). The remaining labor hour estimates are forecasted to other activities that the ten personnel anticipates spending time on. It should be noted that the labor hour estimates reflect the various activities that are anticipated time to spent on, which more than likely will be different to the actual labor hours recorded. This occurs as priorities may shift on a day to day basis.

HELCO-WP-703, page 6, West Hawaii (Waimea) Customer and Field Services labor –

The West Hawaii (Waimea) Customer and Field Services labor hour estimates are based on taking into consideration historical labor hours worked as well as work anticipated in the test year (including the need to schedule for two meter readers to read all of the Waimea District meters each month). In addition, a historical overtime rate of 4.4% for the department was incorporated into the labor forecast, as shown on HELCO-709, page 2. As shown on HELCO-WP-701, page 17, these include six personnel, including two meter

readers, two field services personnel, and two customer accounts representatives . The first step in the process was to assign labor hours for allowed vacation and holidays. Holidays are based on a set number of holidays and schedule and vacation is based on each employee's years of service with the Company. The next step was to determine any nonrecurring work anticipated in the test year. There were no nonrecurring work for the East Hawaii (Hilo) Field Services personnel. The next step was to determine, based on past experience and the department's best estimate of work to be performed, the major activities that the personnel were anticipated to spend time on. As shown on HELCO-WP-703, page 6, these activities included (1) Read Billing Meters (for the meter reading positions), (2) Perform Meter Service Work (for the field representative positions), (3) Manage Past Due Accounts (for the field representative and customer accounts representative positions), (4) Manage and Resolve Billing and Account Problems (for the customer accounts representative positions), (5) Respond To Customer Inquiries and Service Requests (for the customer accounts representative positions), (6) Maintain Customer Account Information (for the customer accounts representative positions), (7) Maintain Meter Information Work (for the field representative positions), (8) Process Payroll (for the customer accounts representative positions), and (9) Process Customer Payments (for the customer accounts representative positions). The remaining labor hour estimates are forecasted to other activities that the ten personnel anticipates spending time on. It should be noted that the labor hour estimates reflect the various activities that are anticipated time to spent on, which more than likely will be different to the actual labor hours recorded. This occurs as priorities may shift on a day to day basis.

HELCO-WP-704, page 4, East Hawaii Customer Services Supervisor labor –

The East Hawaii Customer Services Supervisor labor hour estimates are based on taking into consideration historical labor hours worked as well as work anticipated in the test year. The first step in the process was to assign labor hours for allowed vacation and holidays. Holidays are based on a set number of holidays and schedule and vacation is based on an employee's years of service with the Company. The next step was to determine any nonrecurring work anticipated in the test year. There was no nonrecurring work for the East Hawaii Customer Services Supervisors. The next step was to determine, based on past experience and the Supervisor's best estimate of work to be performed, the major activities that the Supervisor was anticipated to spend time on. As shown on HELCO-WP-704, page 4, this activity included (1) Manage and Resolve Billing & Account Problems. The remaining labor hour estimates are forecasted to other activities that the Supervisor anticipates spending time on. It should be noted that the labor hour estimates reflect the various activities that are anticipated time to spent on, which more than likely will be different to the actual labor hours recorded. This occurs as priorities may shift on a day to day basis.

HELCO-WP-704, page 5, West Hawaii Customer Services Supervisor labor –

The West Hawaii Customer Services Supervisor labor hour estimates are based on taking into consideration historical labor hours worked as well as work anticipated in the test year. The first step in the process was to assign labor hours for allowed vacation and holidays. Holidays are based on a set number of holidays and schedule and vacation is based on an employee's years of service with the Company. The next step was to determine any nonrecurring work anticipated in the test year. There was no nonrecurring work for the West Hawaii Customer Services Supervisors. The next step was to determine, based on

past experience and the Supervisor's best estimate of work to be performed, the major activities that the Supervisor was anticipated to spend time on. As shown on HELCO-WP-704, page 5, these activities included (1) Manage and Resolve Billing & Account Problems, (2) Manage Past Due Accounts, (3) Respond To Customer Inquiries and Service Requests, and (4) Maintain Customer Account Information. The remaining labor hour estimates are forecasted to other activities that the Supervisor anticipates spending time on. It should be noted that the labor hour estimates reflect the various activities that are anticipated time to spent on, which more than likely will be different to the actual labor hours recorded. This occurs as priorities may shift on a day to day basis.

HELCO-WP-704, page 6, East Hawaii Customer Services labor –

The East Hawaii (Hilo) Customer Services labor hour estimates are based on taking into consideration historical labor hours worked as well as work anticipated in the test year. In addition, a historical overtime rate of 4.4% for the department was incorporated into the labor forecast, as shown on HELCO-709, page 2. As shown on HELCO-WP-701, page 17, these include eight personnel, including two cashiers, five customer accounts representatives and one mail clerk. The first step in the process was to assign labor hours for allowed vacation and holidays. Holidays are based on a set number of holidays and schedule and vacation is based on each employee's years of service with the Company. The next step was to determine any nonrecurring work anticipated in the test year. There were no nonrecurring work for the East Hawaii (Hilo) Customer Services personnel. The next step was to determine, based on past experience and the department's best estimate of work to be performed, the major activities that the personnel were anticipated to spend time on. As shown on HELCO-WP-704, page 6, these activities included (1) Process Customer

Payments (for the cashiering positions), (2) Respond To Customer Inquiries and Service Requests (for the customer accounts representative positions), (3) Manage and Resolve Billing and Account Problems (for the customer accounts representative positions), (4) Maintain Customer Account Information (for the customer accounts representative positions), and (5) Handle and Deliver Mail (for the mail clerk position). The remaining labor hour estimates are forecasted to other activities that the eight personnel anticipates spending time on. It should be noted that the labor hour estimates reflect the various activities that are anticipated time to spent on, which more than likely will be different to the actual labor hours recorded. This occurs as priorities may shift on a day to day basis.

- c. See response to item b. above. There are no other supporting documentation and calculations underlying the labor input hours.

CA-IR-349

Ref: HELCO-WP-705; Bad Debt Analysis.

Please update the analysis for all available information for 2006 year-to-date and explain in greater detail the adjustments listed at the bottom of page 1 of 14 of the analysis.

HELCO's Response:

The requested information for 2006 year-to-date is attached.

The adjustments listed at the bottom of HELCO-WP-705, page 1 of 14 can be classified into two types of adjustments. The first type of adjustment (noted by by *, **, ****, ***** and *****) represents large write-offs/recoveries that have been excluded from the calculation of the uncollectible factor for rate case purposes. This methodology was used in HELCO's previous rate case proceedings, including its last proceeding in Docket No. 99-0207. The second type of adjustment (noted by ***, ***** and *****) represents additional accruals (or reversal of accrual) made to bad debt reserves in determining the yearly bad debt expense. These adjustments do not impact the uncollectible factor; it only impacts the yearly bad debt expense and reserves. These adjustments represents specific accounts that the Company believed reserves needed to be set up due to the higher risk of not being able to collect on these accounts. The \$160,000 reversal adjustment made in 2006 (noted as *****) represents the reversal of an adjustment made in error in 2002 (noted as ***). In 2003, the Company determined that the bankruptcy accounts had already been included in the bad debt reserves and the \$160,000 additional reserve was double counted. In 2003, the correction was made to correct for this double counting.

Hawaii Electric Light Company, Inc.

CUSTOMER ACCOUNTS EXPENSE BY ACCOUNTS
BAD DEBT AND UNCOLLECTIBLES
(\$ THOUSANDS)

Line		<u>A</u>		<u>B</u>	<u>C</u>	<u>D</u>	
		Gross Bad Debt	Net Recoveries	Bad Debt	Billed Revenue	Uncollectible Factor	Uncollectibles
1	2000	659	232	427	191,107	.2346%	450
2	2000 Adjusted	611	232	379	-	.2082%	- *
3	2001	853	297	556	195,240	.2794%	576
4	2001 Adjusted	810	269	541	-	.2719%	- **
5	2002	705	341	364	189,767	.1940%	468 ***
6	2002 Adjusted	644	321	323	-	.1721%	- ****
7	2003	613	237	376	213,253	.1813%	222 *****
8	2004	587	240	347	238,986	.1510%	343
9	2004 Adjusted	524	224	300	-	.1305%	- *****
10	2005	605	281	324	291,901	.1180%	427 *****
11	2005 Adjusted	605	278	327	-	.1190%	- *****
12	2006 August YTD	508	254	254	221,378	.1125%	257
13	2006 Operating Forecast						450
14	2006 Test Year at Present Rates (Base Case)				323,184	.12%	388
15	2006 Test Year at Proposed Rates (Base Case)				353,065	.12%	424

* Excludes \$48,114 write-off for Liberty House

** Excludes \$28,027 recovery from Liberty House and \$43,006 write-off for Hawaii Ice & Cold Storage

*** Includes \$160,000 additional reserves for accounts in bankruptcy

**** Excludes \$19,930 recovery from Liberty House and \$61,035 write-off for Kmart

***** Includes \$160,000 reversal of reserves for accounts in bankruptcy (see *** above)

***** Excludes \$15,832 recovery from Kmart and \$62,979 write-off for Citrus Management

***** Includes \$105,000 reserve for East Hawaii Coalition For The Homeless

***** Excludes \$2,648 recovery from Kmart

HAWAII ELECTRIC LIGHT COMPANY, INC.

CA-IR-349
DOCKET NO. 05-0315
PAGE 3 OF 6

2000 - 2005 BAD DEBT WRITE-OFFS

Month	Net Write-offs Amount \$(1000)	Write-offs/ Recoveries (-)/(+) \$(1000)	Adjusted Net Write-offs \$(1000)	12 Months Ending	Adjusted 12 Months Ending	Month	Sales Revenue Amount \$(1000)	12 Months Ending	Percent Write-off	Adjusted Percent Write-off*
Jan 2000	73.788	(48.114)	25.674	73.788	25.674	Oct	13,877.8	153,882.1	0.0480	0.0167
Feb	32.171		32.171	105.959	57.845	Nov	14,264.9	155,140.7	0.0683	0.0373
Mar	18.457		18.457	124.416	76.302	Dec	13,830.7	156,113.4	0.0797	0.0489
Apr	14.956		14.956	139.372	91.258	Jan	15,093.7	158,596.6	0.0879	0.0575
May	32.040		32.040	171.412	123.298	Feb	14,329.5	160,777.8	0.1066	0.0767
Jun	38.723		38.723	210.135	162.021	Mar	14,861.2	163,538.3	0.1285	0.0991
Jul	12.056		12.056	222.191	174.077	Apr	14,560.1	165,944.4	0.1339	0.1049
Aug	37.738		37.738	259.929	211.815	May	15,525.5	169,297.3	0.1535	0.1251
Sep	44.004		44.004	303.933	255.819	Jun	16,363.3	172,908.1	0.1758	0.1480
Oct	45.132		45.132	349.065	300.951	Jul	16,158.9	175,740.2	0.1986	0.1712
Nov	36.811		36.811	385.876	337.762	Aug	16,583.4	178,811.9	0.2158	0.1889
Dec	41.342		41.342	427.218	379.104	Sep	16,647.9	182,097.6	0.2346	0.2082
Jan 2001	64.805		64.805	418.235	418.235	Oct	16,939.6	185,159.4	0.2259	0.2259
Feb	27.901		27.901	413.965	413.965	Nov	16,990.3	187,884.8	0.2203	0.2203
Mar	(2.100)	24.913	22.813	393.408	418.321	Dec	17,052.4	191,106.6	0.2059	0.2189
Apr	22.692		22.692	401.144	426.057	Jan	17,618.6	193,631.5	0.2072	0.2200
May	68.106		68.106	437.212	462.123	Feb	16,876.3	196,178.3	0.2229	0.2356
Jun	51.324		51.324	449.813	474.724	Mar	16,681.0	197,997.4	0.2272	0.2398
Jul	29.704		29.704	467.461	492.372	Apr	16,210.1	199,647.4	0.2341	0.2466
Aug	53.203		53.203	482.927	507.837	May	15,673.5	199,995.4	0.2415	0.2539
Sep	73.689	(39.892)	33.797	512.612	497.630	Jun	16,017.9	199,650.1	0.2568	0.2493
Oct	47.750		47.750	515.229	500.248	Jul	16,017.7	199,508.9	0.2582	0.2507
Nov	23.077		23.077	501.495	486.514	Aug	15,913.2	198,838.7	0.2522	0.2447
Dec	95.601		95.601	555.754	540.773	Sep	16,693.6	198,884.4	0.2794	0.2719
Jan-02	36.376		36.376	527.325	512.344	Oct	16,309.5	198,254.3	0.2660	0.2584
Feb	20.078		20.078	519.501	504.521	Nov	15,618.3	196,882.3	0.2639	0.2563
Mar	31.269		31.269	552.869	512.977	Dec	15,410.4	195,240.2	0.2832	0.2627
Apr	15.713		15.713	545.890	505.998	Jan	15,177.5	192,799.2	0.2831	0.2624
May	98.672	(61.035)	37.637	576.457	475.529	Feb	14,611.0	190,533.9	0.3025	0.2496
Jun	11.016		11.016	536.149	435.221	Mar	14,756.5	188,609.5	0.2843	0.2308
Jul	(4.133)	19.930	15.797	502.312	421.314	Apr	15,162.7	187,562.0	0.2678	0.2246
Aug	32.035		32.035	481.143	400.146	May	15,267.9	186,956.3	0.2574	0.2140
Sep	25.628		25.628	433.082	391.977	Jun	15,880.5	186,818.9	0.2318	0.2098
Oct	34.273		34.273	419.605	378.500	Jul	16,558.2	187,359.5	0.2240	0.2020
Nov	32.597		32.597	429.125	388.020	Aug	16,377.7	187,823.9	0.2285	0.2066
Dec	30.355		30.355	363.879	322.774	Sep	16,468.0	187,598.3	0.1940	0.1721
Jan-03	38.383		38.383	365.886	324.781	Oct	16,113.0	187,401.7	0.1952	0.1733
Feb	39.197		39.197	385.005	343.900	Nov	16,330.7	188,114.1	0.2047	0.1828
Mar	15.600		15.600	369.336	328.231	Dec	17,063.5	189,767.2	0.1946	0.1730
Apr	19.906		19.906	373.528	332.424	Jan	17,166.5	191,756.1	0.1948	0.1734
May	44.474		44.474	319.330	339.261	Feb	16,447.3	193,592.4	0.1649	0.1752
Jun	14.552		14.552	322.866	342.797	Mar	16,908.5	195,744.4	0.1649	0.1751
Jul	36.535		36.535	363.533	363.535	Apr	17,394.0	197,975.7	0.1836	0.1836
Aug	37.789		37.789	369.288	369.289	May	17,820.1	200,528.0	0.1842	0.1842
Sep	32.222		32.222	375.882	375.883	Jun	18,028.5	202,675.9	0.1855	0.1855
Oct	39.454		39.454	381.064	381.064	Jul	17,586.6	203,704.3	0.1871	0.1871
Nov	23.717		23.717	372.184	372.184	Aug	17,662.0	204,988.6	0.1816	0.1816
Dec	34.077		34.077	375.905	375.906	Sep	18,851.7	207,372.3	0.1813	0.1813
Jan-04	101.920	(62.679)	38.941	439.442	376.464	Oct	18,257.1	209,516.4	0.2097	0.1797
Feb	16.737		16.737	416.983	354.004	Nov	18,046.3	211,231.9	0.1974	0.1676
Mar	11.557		11.557	412.940	349.961	Dec	19,084.1	213,252.5	0.1936	0.1641
Apr	6.927		6.927	399.961	336.982	Jan	18,726.4	214,812.5	0.1862	0.1569
May	8.155		8.155	363.642	300.663	Feb	17,887.7	216,252.8	0.1682	0.1390
Jun	30.667	13.100	43.767	379.757	329.878	Mar	17,881.5	217,225.8	0.1748	0.1519
Jul	23.807		23.807	367.029	317.150	Apr	18,661.2	218,493.0	0.1680	0.1452
Aug	14.312	2.732	17.044	343.552	296.405	May	18,725.7	219,398.6	0.1566	0.1351
Sep	18.317		18.317	329.647	282.500	Jun	20,047.1	221,417.3	0.1489	0.1276
Oct	30.821		30.821	321.014	273.867	Jul	20,421.9	224,252.6	0.1431	0.1221
Nov	42.012		42.012	339.309	292.162	Aug	20,833.3	227,423.9	0.1492	0.1285
Dec	41.913		41.913	347.144	299.998	Sep	21,332.8	229,905.1	0.1510	0.1305
Jan-05	40.937		40.937	349.140	301.994	Oct	20,959.1	232,607.1	0.1501	0.1298
Feb	46.335		46.335	378.737	331.592	Nov	21,393.8	235,954.6	0.1605	0.1405
Mar	44.408		44.408	411.589	364.443	Dec	22,115.7	238,986.2	0.1722	0.1525
Apr	(12.023)		(12.023)	392.640	345.493	Jan	22,284.6	242,544.3	0.1619	0.1424
May	44.130		44.130	428.615	381.468	Feb	21,263.7	245,920.3	0.1743	0.1551
Jun	21.829		21.829	356.797	359.530	Mar	21,465.8	249,504.6	0.1430	0.1441
Jul	9.159	2.648	11.807	342.150	347.530	Apr	21,454.1	252,297.6	0.1356	0.1377
Aug	27.762		27.762	355.600	358.248	May	22,019.7	255,591.5	0.1391	0.1402
Sep	(27.115)		(27.115)	310.168	312.816	Jun	23,779.8	259,324.2	0.1196	0.1206
Oct	33.418		33.418	312.765	315.413	Jul	24,937.0	263,839.2	0.1185	0.1195
Nov	44.122		44.122	314.875	317.523	Aug	25,842.3	268,848.2	0.1171	0.1181
Dec	51.309		51.309	324.271	326.919	Sep	27,308.0	274,823.4	0.1180	0.1190
Jan-06	51.244		51.244	334.578	337.226	Oct	26,873.9	280,738.2	0.1192	0.1201
Feb	41.579		41.579	329.823	332.470	Nov	27,727.2	287,068.6	0.1149	0.1158
Mar	(4.180)		(4.180)	281.234	283.882	Dec	26,947.8	291,900.7	0.0963	0.0973
Apr	59.356		59.356	352.612	355.261	Jan	27,655.1	297,271.3	0.1186	0.1195
May	34.064		34.064	342.546	345.195	Feb	26,495.0	302,502.6	0.1132	0.1141
Jun	22.087		22.087	342.804	345.453	Mar	24,447.4	305,484.2	0.1122	0.1131
Jul	23.325		23.325	356.970	356.971	Apr	27,693.5	311,723.6	0.1145	0.1145
Aug	26.353		26.353	355.561	355.562	May	26,417.4	316,121.3	0.1125	0.1125

Note: Percent write-off adjusted to remove large write-offs and recoveries.

HAWAII ELECTRIC LIGHT COMPANY, INC.

GROSS \$ TRANSFERRED TO ACCOUNT 144

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
<u>YEAR</u>	<u>MONTH</u>	<u>AMOUNT</u>	NUMBER OF <u>ACCOUNTS</u>	<u>AVERAGE</u>
2006	January	82,455	146	565
	February	68,947	144	479
	March	32,828	95	346
	April	97,194	96	1,012
	May	67,005	133	504
	June	53,516	124	432
	July	35,336	91	388
	August	<u>61,347</u>	<u>131</u>	<u>468</u>
	Total	498,629	960	519

Hawaii Electric Light Company, Inc.
2006 Aging and Delinquency
Total Island

CA-IR-349
DOCKET NO. 05-0315
PAGE 5 OF 6

		Residential		Commercial		Total	
Month		Customers	Dollars	Customers	Dollars	Customers	Dollars
Jan	30 days	5,767	996,085	1,071	535,838	6,838	1,531,924
	60+ days	2,018	346,423	293	616,665	2,311	963,088
	total	7,785	1,342,508	1,364	1,152,504	9,149	2,495,012
Feb	30 days	6,381	1,099,793	1,160	489,838	7,541	1,589,631
	60+ days	1,611	265,340	252	553,876	1,863	819,216
	total	7,992	1,365,132	1,412	1,043,715	9,404	2,408,847
Mar	30 days	6,142	1,054,896	1,099	512,955	7,241	1,567,851
	60+ days	1,700	307,140	254	544,775	1,954	851,914
	total	7,842	1,362,035	1,353	1,057,730	9,195	2,419,765
Apr	30 days	6,415	1,075,180	1,106	452,482	7,521	1,527,662
	60+ days	1,606	281,477	268	521,181	1,874	802,658
	total	8,021	1,356,657	1,374	973,662	9,395	2,330,320
May	30 days	6,060	1,047,263	1,189	623,229	7,249	1,670,492
	60+ days	1,995	312,500	274	531,741	2,269	844,241
	total	8,055	1,359,763	1,463	1,154,970	9,518	2,514,734
Jun	30 days	6,370	1,064,153	1,259	701,914	7,629	1,766,067
	60+ days	1,893	305,195	405	600,164	2,298	905,359
	total	8,263	1,369,348	1,664	1,302,078	9,927	2,671,426
Jul	30 days	6,532	1,097,714	1,237	743,773	7,769	1,841,487
	60+ days	1,949	304,143	358	607,669	2,307	911,813
	total	8,481	1,401,857	1,595	1,351,442	10,076	2,753,299
Aug	30 days	7,113	1,318,524	1,186	587,852	8,299	1,906,375
	60+ days	2,062	323,936	270	521,217	2,332	845,153
	total	9,175	1,642,460	1,456	1,109,069	10,631	2,751,529
YTD Avg	30 days	6,348	1,094,201	1,163	580,985	7,511	1,675,186
	60+ days	1,854	305,769	297	562,161	2,151	867,930
	total	8,202	1,399,970	1,460	1,143,146	9,662	2,543,116

CALCULATION: Total Residential Customers / Total Customers = 8,202 / 9,662 = 85%

Hawaii Electric Light Company, Inc.
2006 Aging and Delinquency - Bad Debt Accounts
Total Island

CA-IR-349
DOCKET NO. 05-0315
PAGE 6 OF 6

Month		Total Count	Total Amount
Jan	Residential	5,482	1,853,623
	Commercial	672	963,585
	total	6,154	2,817,208
Feb	Residential	5,489	1,866,459
	Commercial	677	959,477
	total	6,166	2,825,936
Mar	Residential	5,439	1,858,537
	Commercial	670	947,583
	total	6,109	2,806,120
Apr	Residential	5,411	1,855,367
	Commercial	667	988,511
	total	6,078	2,843,878
May	Residential	5,363	1,849,872
	Commercial	672	992,560
	total	6,035	2,842,431
Jun	Residential	5,343	1,859,469
	Commercial	678	990,913
	total	6,021	2,850,382
Jul	Residential	5,311	1,852,234
	Commercial	688	992,371
	total	5,999	2,844,604
Aug	Residential	5,288	1,850,803
	Commercial	686	982,748
	total	5,974	2,833,551
YTD Avg	Residential	5,391	1,855,796
	Commercial	676	977,218
	total	6,067	2,833,014

CALCULATION: Total Residential \$ / Total \$ = \$1,855,796 / 2,833,014 = 66%
Total Commercial \$ / Total \$ = \$977,218 / 2,833,014 = 34%

CA-IR-350

Ref: HELCO Response to CA-IR-2 (T-7), Attachment A; Direct Non-labor Support.

Please provide comparable non-labor actual expenses by NARUC Account, RA, Activity, Location and Expense Element for calendar 2004, calendar 2005 and year-to-date 2006, as available.

HELCO's Response:

The information requested is attached.

Hawaii Electric Light Company, Inc.
Direct Non-Labor

NARUC Account	RA	Activity	Location	Expense Element	2004	2005	YTD Aug-06	2006 Budget	Budget Adjts	TY 2006 Estimate
901	HCA	600	HAH	205	0	0	0	2,400	0	2,400
901	HCA	600	HAH	301	0	2,823	2,973 **	11,544	0	11,544
901	HCA	600	HAH	501	0	0	373	0	0	0
901	HCA	600	HAH	501	0	306	0	0	0	0
901	HCA	600	HAH	522	0	0	0	5,400	0	5,400
901	HCA	618	HAH	205	0	744	103	0	0	0
901	HCA	618	HAH	501	0	321	271	0	0	0
901	HCA	700	HEL	205	0	186	0	0	0	0
901	HCA	700	HEL	521	0	29	0	0	0	0
901	HCA	700	HEL	522	0	34	470	0	0	0
901	HCA	701	HEL	205	0	1,188	0	0	0	0
901	HCA	701	HEL	521	0	19	0	0	0	0
901	HCA	701	HEL	522	0	461	21	0	0	0
901	HCA	735	HEL	205	0	545	186	0	0	0
901	HCA	735	HEL	522	0	13	449	0	0	0
901	HCA	738	HEL	205	0	930	0	0	0	0
901	HCA	738	HEL	521	0	12	0	0	0	0
901	HCA	738	HEL	522	0	238	43	0	0	0
901	HCA	749	HEL	516	0	0	275	1,200	0	1,200
901	HCA	789	HEL	501	0	0	0	4,500	0	4,500
901	HCA	789	HEL	520	0	0	0	3,000	0	3,000
901	HCA	789	HEL	521	0	41	0	0	0	0
901	HCA	797	HEL	521	0	21	45	0	0	0
901	HCA	807	HEL	201	0	33	0	0	0	0
901	HCA	807	HEL	205	163	0	0	0	0	0
901	HCA	807	HEL	521	0	34	23	0	0	0
901	HCA	807	HEL	522	27	0	0	0	0	0
Total HCA, Account 901					190	7,978	5,233	28,044	0	28,044
901	HAK	789	HEL	501	89	0	0	0	0	0
Total HAK, Account 901					89	0	0	0	0	0
901	HEA	735	HEL	205	0	0	372	0	0	0
901	HEA	735	HEL	522	0	0	103	0	0	0
901	HEA	807	HEL	205	0	545	390	0	0	0
901	HEA	807	HEL	520	0	25	0	0	0	0
901	HEA	807	HEL	522	0	84	0	0	0	0
Total HEA, Account 901					0	654	866	0	0	0
TOTAL ACCOUNT 901					279	8,632	6,099	28,044	0	28,044
902	HAA	610	HAH	205	25	0	0	0	0	0
Total HAA, Account 902					25	0	0	0	0	0
902	HCK	610	HAK	201	0	3,095	2,382	0	0	0
902	HCK	610	HAK	205	0	798	208	1,200	0	1,200
902	HCK	610	HAK	301	0	27,306	31,106	25,092	16,812	41,904
902	HCK	610	HAK	501	0	818	1,133	192	0	192
902	HCK	610	HAK	505	0	0	380	0	0	0
Total HCK, Account 902					0	32,017	35,209	26,484	16,812	43,296

** Note that for 2004 and 2005, the Customer Service Manager's vehicle costs were charged to HCA600HELNENHCZZZZ301 in NARUC Account 921.00

Hawaii Electric Light Company, Inc..
Direct Non-Labor

CA-IR-350
DOCKET NO. 05-0315
PAGE 3 OF 6

<u>NARUC</u> <u>Account</u>	<u>RA</u>	<u>Activity</u>	<u>Location</u>	<u>Expense</u> <u>Element</u>	<u>2004</u>	<u>2005</u>	<u>YTD</u> <u>Aug-06</u>	<u>2006</u> <u>Budget</u>	<u>Budget</u> <u>Adits</u>	<u>TY 2006</u> <u>Estimate</u>
902	HAK	610	HAK	201	419	44	0	0	0	0
902	HAK	610	HAK	205	873	13	0	0	0	0
902	HAK	610	HAK	301	46,251	13,945	0	0	0	0
902	HAK	610	HAK	501	2,131	1,005	0	0	0	0
902	HAK	610	HAK	503	0	0	0	0	0	0
Total HAK, Account 902					49,674	15,007	0	0	0	0
902	HCR	610	HAH	201	0	491	4,846	0	0	0
902	HCR	610	HAH	205	0	424	58	3,300	0	3,300
902	HCR	610	HAH	301	0	38,229	43,548	35,129	23,536	58,665
902	HCR	610	HAH	452	0	0	0	2,172	0	2,172
902	HCR	610	HAH	501	0	3,554	10,351	10,800	0	10,800
902	HCR	610	HAH	550	0	15,543	5,618	21,264	0	21,264
Total HCR, Account 902					0	58,241	64,421	72,665	23,536	96,201
902	HAR	610	HAH	201	4,632	5,130	0	0	0	0
902	HAR	610	HAH	205	1,140	338	0	0	0	0
902	HAR	610	HAH	301	61,702	18,593	0	0	0	0
902	HAR	610	HAH	501	7,365	2,483	0	0	0	0
902	HAR	610	HAH	550	14,709	20,474	0	0	0	0
Total HAR, Account 902					89,548	47,018	0	0	0	0
902	HCW	610	HAW	201	0	348	86	0	0	0
902	HCW	610	HAW	205	0	0	135	1,755	0	1,755
902	HCW	610	HAW	301	0	10,922	12,442	10,037	6,725	16,762
902	HCW	610	HAW	501	0	545	743	0	0	0
Total HCW, Account 902					0	11,815	13,406	11,792	6,725	18,517
902	HAW	610	HAW	201	3,384	26	0	0	0	0
902	HAW	610	HAW	205	998	0	0	0	0	0
902	HAW	610	HAW	301	17,849	4,648	0	0	0	0
902	HAW	610	HAW	501	1,659	673	0	0	0	0
Total HAW, Account 902					23,890	5,347	0	0	0	0
TOTAL ACCOUNT 902					163,137	169,445	113,036	110,941	47,073	158,014
903	HCH	600	HAH	201	0	594	1,469	0	0	0
903	HCH	600	HAH	205	0	6,588	3,752	4,320	0	4,320
903	HCH	600	HAH	501	0	13,880	12,685	34,500	49,800	84,300
903	HCH	600	HAH	521	0	2	112	0	0	0
903	HCH	600	HAH	522	0	1,385	5,087	0	0	0
903	HCH	600	HAH	550	0	52,397	48,699	0	0	0
903	HCH	604	HAH	205	0	246	1,024	0	0	0
903	HCH	604	HAH	451	0	13,389	18,503	33,840	0	33,840
903	HCH	604	HAH	501	0	0	0	81,000	0	81,000
903	HCH	604	HAH	550	0	0	0	32,820	0	32,820
903	HCH	611	HAH	501	0	0	0	16,500	0	16,500
903	HCH	611	HAH	522	0	0	172	0	0	0
903	HCH	611	HAH	550	0	0	0	2,244	0	2,244
903	HCH	614	HAH	201	0	31,835	33,771	0	0	0
903	HCH	614	HAH	205	0	0	296	45,000	0	45,000
903	HCH	614	HAH	501	0	4,712	36	12,000	0	12,000
903	HCH	614	HAH	550	0	166,148	201,681	293,004	0	293,004
903	HCH	616	HAH	201	0	812	0	0	0	0
903	HCH	616	HAH	205	0	416	0	9,000	0	9,000
903	HCH	616	HAH	501	0	6,166	13,641	43,200	0	43,200
903	HCH	616	HAH	550	0	28,644	40,298	27,108	0	27,108
903	HCH	750	HAH	201	0	161	0	0	0	0

Hawaii Electric Light Company, Inc.
Direct Non-Labor

CA-IR-350
DOCKET NO. 05-0315
PAGE 4 OF 6

NARUC Account	RA	Activity	Location	Expense Element	2004	2005	YTD Aug-06	2006 Budget	Budget Adjts	TY 2006 Estimate
903	HCH	750	HAH	205	0	0	0	6,360	0	6,360
903	HCH	750	HAH	501	0	0	0	1,500	0	1,500
903	HCH	789	HEL	501	0	706	1,241	12,000	0	12,000
903	HCH	789	HEL	522	0	0	761	0	0	0
903	HCH	797	HEL	201	0	73	0	0	0	0
903	HCH	797	HEL	205	0	27	0	0	0	0
903	HCH	966	HEL	201	0	460	73	0	0	0
903	HCH	966	HEL	205	0	0	197	5,640	0	5,640
903	HCH	966	HEL	301	0	2,823	2,973	5,018	0	5,018
903	HCH	966	HEL	501	0	5,552	3,969	36,660	0	36,660
903	HCH	966	HEL	503	0	13,324	6,254	0	0	0
903	HCH	966	HEL	900	0	0	9,446	0	0	0
Total HCH, Account 903					0	350,340	406,140	701,714	49,800	751,514
903	HAS	600	HAH	201	984	838	0	0	0	0
903	HAS	600	HAH	205	6,660	1,593	99	0	0	0
903	HAS	600	HAH	501	21,965	7,995	108	0	0	0
903	HAS	600	HAH	550	73,900	18,421	38,941	0	0	0
903	HAS	604	HAH	451	34,955	26,591	0	0	0	0
903	HAS	614	HAH	201	43,116	15,234	0	0	0	0
903	HAS	614	HAH	501	387	0	0	0	0	0
903	HAS	614	HAH	550	274,881	115,745	0	0	0	0
903	HAS	616	HAH	201	1,209	(189)	0	0	0	0
903	HAS	616	HAH	205	900	274	0	0	0	0
903	HAS	616	HAH	501	16,130	7,587	0	0	0	0
903	HAS	616	HAH	550	34,942	17,551	0	0	0	0
903	HAS	618	HAH	501	1,955	4,040	0	0	0	0
903	HAS	720	HEL	900	0	14	0	0	0	0
903	HAS	750	HEL	501	0	4,980	0	0	0	0
903	HAS	789	HEL	205	286	173	0	0	0	0
903	HAS	789	HEL	501	177	773	0	0	0	0
903	HAS	797	HEL	205	51	0	0	0	0	0
903	HAS	933	HEL	501	0	414	0	0	0	0
903	HAS	966	HEL	201	477	574	0	0	0	0
903	HAS	966	HEL	501	30,690	2,228	0	0	0	0
903	HAS	966	HEL	503	12,952	11,705	0	0	0	0
Total HAS, Account 903					556,617	236,541	39,148	0	0	0
903	HCC	600	HAH	205	0	0	890	0	0	0
903	HCC	604	HAH	205	0	451	0	0	0	0
903	HCC	616	HAH	205	0	51	0	0	0	0
903	HCC	616	HAH	900	7,514	1,044	0	0	0	0
903	HCC	737	HEL	501	100	0	0	0	0	0
Total HCH, Account 903					7,614	1,546	890	0	0	0
903	HCK	600	HAK	205	0	2,625	4,180	1,200	0	1,200
903	HCK	600	HAK	301	0	5,461	6,221	15,941	27,400	43,341
903	HCK	600	HAK	501	0	9,762	13,123	360	0	360
903	HCK	604	HAK	451	0	10,321	13,173	26,892	0	26,892
903	HCK	611	HAK	201	0	46	110	0	0	0
903	HCK	611	HAK	205	0	340	0	0	0	0
903	HCK	611	HAK	501	0	273	372	0	0	0
903	HCK	616	HAK	201	0	116	0	0	0	0
903	HCK	616	HAK	205	0	0	0	1,200	0	1,200
903	HCK	616	HAK	501	0	4,472	4,745	7,500	0	7,500
903	HCK	616	HAK	503	0	0	7,426	0	0	0
903	HCK	618	HAK	201	0	57	0	0	0	0
903	HCK	618	HAK	205	0	475	187	0	0	0
903	HCK	618	HAK	301	0	5,461	6,221	5,018	0	5,018

Hawaii Electric Light Company, Inc.
Direct Non-Labor

CA-IR-350
DOCKET NO. 05-0315
PAGE 5 OF 6

NARUC Account	RA	Activity	Location	Expense Element	2004	2005	YTD Aug-06	2006 Budget	Budget Adits	TY 2006 Estimate
903	HCK	618	HAK	501	0	0	0	1,200	0	1,200
903	HCK	618	HAK	521	0	0	0	108	0	108
903	HCK	619	HAK	501	0	852	1,119	0	0	0
Total HCK, Account 903					0	40,261	56,877	59,419	27,400	86,819
903	HAK	600	HAK	201	392	0	0	0	0	0
903	HAK	600	HAK	301	8,925	2,324	0	0	0	0
903	HAK	600	HAK	501	4,017	4,467	119	0	0	0
903	HAK	604	HAK	201	708	0	0	0	0	0
903	HAK	604	HAK	451	25,270	20,966	0	0	0	0
903	HAK	611	HAK	201	3	0	0	0	0	0
903	HAK	611	HAK	301	8,925	2,324	0	0	0	0
903	HAK	611	HAK	521	798	335	0	0	0	0
903	HAK	616	HAK	501	7,089	2,837	0	0	0	0
903	HAK	616	HAK	503	3,864	0	0	0	0	0
903	HAK	618	HAK	205	0	1,298	0	0	0	0
903	HAK	618	HAK	301	9,783	4,648	0	0	0	0
903	HAK	619	HAK	501	1,514	1,006	0	0	0	0
Total HAK, Account 903					71,288	40,205	119	0	0	0
903	HCR	600	HAH	201	0	0	109	0	0	0
903	HCR	600	HAH	205	0	341	2,065	0	0	0
903	HCR	600	HAH	301	0	5,461	6,221	5,018		5,018
903	HCR	600	HAH	501	0	839	1,118	0	0	0
903	HCR	604	HAH	205	0	0	255	0	0	0
903	HCR	611	HAH	205	0	654	0	0	0	0
903	HCR	618	HAH	201	0	749	52	0	0	0
903	HCR	618	HAH	205	0	0	372	16,860	0	16,860
903	HCR	618	HAH	301	0	5,461	6,221	5,018	0	5,018
903	HCR	618	HAH	501	0	3,598	64,614	45,000	0	45,000
903	HCR	618	HAH	502	0	3,810	747	24,000	0	24,000
903	HCR	618	HAH	522	0	30	0	0	0	0
903	HCR	618	HAH	550	0	178	2,686	0	0	0
903	HCR	619	HAH	205	0	158	0	0	0	0
903	HCR	619	HAH	501	0	10	0	0	0	0
903	HCR	750	HEL	501	0	56	0	1,500	0	1,500
903	HCR	750	HEL	515	0	94	94	0	0	0
903	HCR	789	HEL	201	0	545	178	0	0	0
903	HCR	789	HEL	205	0	1,088	0	0	0	0
903	HCR	789	HEL	501	0	892	269	14,400	0	14,400
903	HCR	789	HEL	521	0	164	150	0	0	0
903	HCR	789	HEL	522	0	671	1,504	0	0	0
903	HCR	797	HEL	201	0	73	0	0	0	0
Total HCR, Account 903					0	24,872	86,655	111,796	0	111,796
903	HAR	600	HAH	201	170	283	0	0	0	0
903	HAR	600	HAH	205	529	0	0	0	0	0
903	HAR	600	HAH	301	8,924	2,324	0	0	0	0
903	HAR	600	HAH	501	1,196	670	0	0	0	0
903	HAR	600	HAH	521	58	0	0	0	0	0
903	HAR	600	HAH	522	106	0	0	0	0	0
903	HAR	604	HAH	205	0	157	0	0	0	0
903	HAR	618	HAH	201	0	488	0	0	0	0
903	HAR	618	HAH	205	156	0	0	0	0	0
903	HAR	618	HAH	501	56,610	78,085	0	0	0	0
903	HAR	618	HAH	502	631	4,370	0	0	0	0
903	HAR	618	HAH	550	1,434	555	0	0	0	0
903	HAR	619	HAH	201	5,690	0	(4,852)	0	0	0
903	HAR	619	HAH	301	8,925	2,324	0	0	0	0

Hawaii Electric Light Company, Inc.
Direct Non-Labor

CA-IR-350
DOCKET NO. 05-0315
PAGE 6 OF 6

NARUC Account	RA	Activity	Location	Expense Element	2004	2005	YTD Aug-06	2006 Budget	Budget Adits	TY 2006 Estimate
903	HAR	789	HEL	201	433	0	0	0	0	0
903	HAR	789	HEL	205	163	166	0	0	0	0
903	HAR	789	HEL	501	526	579	0	0	0	0
Total HCR, Account 903					85,551	90,001	(4,852)	0	0	0
903	HCW	600	HAW	205	0	241	883	48	0	48
903	HCW	600	HAW	301	0	0	0	5,018	0	5,018
903	HCW	600	HAW	501	0	1,948	2,495	6,504	0	6,504
903	HCW	600	HAW	505	0	0	1,758	0	0	0
903	HCW	604	HAW	451	0	4,346	5,785	12,684	0	12,684
903	HCW	614	HAW	205	0	0	0	996	0	996
903	HCW	616	HAW	201	0	232	0	0	0	0
903	HCW	616	HAW	205	0	0	0	84	0	84
903	HCW	616	HAW	501	0	2,589	2,589	7,500	0	7,500
903	HCW	616	HAW	505	0	0	803	0	0	0
903	HCW	618	HAW	205	0	62	56	0	0	0
903	HCW	618	HAW	301	0	5,461	6,221	5,018	0	5,018
903	HCW	619	HAW	301	0	0	0	5,018	0	5,018
Total HCW, Account 903					0	14,879	20,590	42,870	0	42,870
903	HAW	600	HAW	301	8,925	2,324	0	0	0	0
903	HAW	600	HAW	501	4,593	1,958	48	0	0	0
903	HAW	604	HAW	201	292	0	0	0	0	0
903	HAW	604	HAW	451	12,074	9,896	0	0	0	0
903	HAW	614	HAW	205	371	0	0	0	0	0
903	HAW	614	HAW	640	82	66	79	0	0	0
903	HAW	618	HAW	301	8,925	2,324	0	0	0	0
903	HAW	619	HAW	501	584	0	0	0	0	0
Total HAW, Account 903					35,846	16,568	127	0	0	0
903	HDK	600	HAK	201	92	44	0	0	0	0
903	HDK	600	HAK	501	125	83	0	130	0	130
903	HDK	600	HAK	505	0	0	380	0	0	0
903	HDK	604	HAK	451	0	1,233	723	0	0	0
Total HDK, Account 903					217	1,360	1,103	130	0	130
903	HDW	600	HAW	201	0	42	0	0	0	0
903	HDW	600	HAW	205	100	105	0	100	0	100
903	HDW	614	HAW	205	83	0	0	0	0	0
Total HDW, Account 903					183	147	0	100	0	100
903	HWA	600	HAH	522	0	0	158	0	0	0
Total HWA, Account 903					0	0	158	0	0	0
TOTAL ACCOUNT 903					757,316	816,720	606,955	916,029	77,200	993,229
904	HCH	618	HEL	900	343,070	426,824	257,163	450,000	(62,200)	387,800
Total HCH, Account 904					343,070	426,824	257,163	450,000	(62,200)	387,800

CA-IR-351

Ref: T-8, page 7; HELCO Participation In Low Income Housing Projects.

According to Mr. Beck, "HELCO has been participating with the County of Hawaii and others on the Waikoloa Employee Housing project in Waikoloa Village in West Hawaii, and sees this development as one of the first opportunities to assist affordable housing projects under this new program." Please provide the following information:

- a. Explain the plans and current status of activities with respect to the Waikoloa Employee Housing project.
- b. Identify what HELCO has been doing with regard to its "participation" to date, indicating the employees involved and activities undertaken.
- c. Provide a monthly breakdown of expenditures to-date, by RA, activity and expense element, with an explanation of each individually significant cost incurred.
- d. Identify the individuals and organizations referenced as "others" in the quoted testimony and explain the roles each is expected to play.
- e. State whether HELCO has been expensing the affordable housing costs incurred to-date and when/how such costs are to be segregated for cost recovery through the REEPAH process.

a. From its discussions with the County of Hawaii, HELCO understands that plans for the Waikoloa Employee Housing Project call for site work and infrastructure construction to commence in January 2007, followed by vertical construction starting around July 2007. The first homes are expected to be ready for occupancy in May 2008, with additional construction phases to follow through 2012. Conceptual plans for the residential units are under development.

b. HELCO has been meeting with representatives from the County of Hawaii and its contractor, UniDev, LLC ("UniDev"). Meetings were held on May 23, 2006 and on July 5, 2006. HELCO also met with the project architect, McLarand, Vasquez, Emsieck & Partners ("MVE Partners") on August 28, 2006 at UniDev's Honolulu office.

HELCO is participating in an advisory role by providing information that supports planning for ENERGY STAR® or "Built Green" compliance for residential buildings, by reviewing and critiquing energy efficiency components and measures.

HELCO has also discussed solar water heating design issues with the County of Hawaii and UniDev. To facilitate the contractor's design work, HELCO also provided spreadsheets with which to analyze possible panel configurations based on the sun zone of the project location.

HELCO's IRP/Energy Services Administrator and Energy Services Analyst have been the primary individuals participating in the project.

c. HELCO's expenditures for the month of July 2006 were \$44.39 for Labor and \$49.21 for On-Cost expense elements. Expenditures for the month of August 2006 were \$97.92 for Labor and \$99.15 for overhead expense elements. Expenditures so far for September 2006 consist of \$1,129.49 for Labor and \$755.17 for overhead expense elements. The expense elements fall under RA HELCO-EB. These incurred costs cover the time and resources spent on activities described in the response to sub-part b.

d. "Others" refers to the following parties:

(1) UniDev, LLC ("UniDev"), the owner's representative for the Waikoloa Employee Housing Project. HELCO has met with Jeff Minter, President; and James Leonard, Project Consultant of UniDev, UniDev's role is to assist the County in providing the planning, financing, design, construction, marketing, and management for the Waikoloa Employee Housing project.

(2) MVE-Pacific, Inc. ("MVEP"), the project architect. HELCO has met with MVEP architects Geoff Miasnik and Paul Zaleski. As project architect, MVEP is developing floor plans and site plans for the homes in the project, including all energy-related systems that will qualify the homes for ENERGY STAR certification.

(3) State of Hawaii Department of Business, Economic Development, and Tourism ("DBEDT"). HELCO has met with G. Suzuki-Jones. DBEDT is providing knowledge and

expertise on planning considerations that promote energy efficiency in homes specifically in the areas of natural ventilation, landscaping, insulation, radiant barriers, and heat mitigation.

e. HELCO has work orders to separately track the time and resources spent specifically on its participation in the Waikoloa Employee Housing Project planning (W.O. ES000016) and in the development of REEPAH (W.O. ES000015).

CA-IR-352

Ref: T-8, page 8; HELCO Participation In Solar Water Heating Financing.

According to Mr. Beck, "HELCO could also facilitate homebuyers' purchases of renewable solar technologies by working with local credit unions and banks to buy down the cost of solar water heating systems, and/or the interest rate on the loans. The buy-down under this program would be in addition to state and federal tax credits, and utility DSM co-payments that are already available to homeowners." Please provide the following information:

- a. Explain HELCO's specific plans and terms for the buy down of solar water heating costs and/or financing rates.
- b. Provide projections of anticipated monthly volumes of transactions and HELCO costs under the planned buy down arrangements.
- c. Explain why/if the existing DSM co-payments are believed to be insufficient without additional buy-down subsidies to adequately stimulate solar water heating installations.
- d. What are the current state and federal tax credit levels and why are they, when combined with existing DSM co-payments insufficient, without additional buy-down subsidies, to adequately stimulate solar water heating installations.
- e. Explain HELCO's planned accounting for the costs associated with this element of the REEEP AH.

HELCO's Response:

- a. HELCO investigated the feasibility of assisting homeowners in affordable housing through a zero-interest loan option that will enable them to overcome the initial capital cost of solar water heating systems. HELCO would work with a broad group of local financial institutions to buy interest rates down to zero percent. Generally, as explained in HELCO T-8, page 7, a household qualifies for affordable housing if their annual income does not exceed 140 percent of the state's median household income. However, as explained in HELCO's response to CA-IR-267, subpart f, HELCO has decided to focus its efforts on developing the residential grant program described in HELCO's response to CA-IR-242, subpart a.
- b. HELCO anticipates there would be approximately 50 program participants annually, therefore an average volume of about four solar water heating units to be installed per month. The monthly costs for implementation are estimated to be about \$21,000. See

response to subpart a above concerning HELCO, at this time, deciding to focus its efforts on developing a residential grant program.

- c. The existing DSM co-payments are insufficient for the targeted residential customer segment to overcome the high capital costs associated with the purchase and installation of solar water heating equipment. As a result, this customer segment cannot participate in HELCO's programs without additional financial assistance.
- d. The current federal tax credit represents 30% of the customer's net costs (full capital cost less the HELCO rebate). The state tax credit represents 35% of the customer's net costs (full capital cost less the HELCO rebate less the federal tax credit) up to a cap of \$1,750. The federal tax credit is scheduled to expire at the end of 2007. While these tax credits provide a substantial reduction in the capital cost required for solar water heaters, HELCO estimates the net cost to range from \$2,570 to \$2,900. Many homeowners in affordable housing, particularly those with less than the state's median household income, cannot overcome these costs without additional buy-down subsidies.
- e. HELCO intends to establish an accounting approach that tracks the costs uniquely associated with the solar water heating element of the REEEP AH.

CA-IR-353

Ref: T-8, pages 8 and 9; HELCO Participation in PV Systems.

According to Mr. Beck, "HELCO would help affordable housing developers identify potential sites for small (less than 10 KW) photovoltaic ("PV") systems on commercial buildings such as community centers. A portion of the fund could be used to pay for a portion of the purchase and installation cost of the PV controls and array. The community center would then be eligible for HELCO's net energy metering tariff." Please provide the following information:

- a. What is HELCO's best estimate of the number of new "potential sites" for small PV systems on commercial buildings that might be addressed by this element of the REEPAH?
- b. Identify what HELCO has been doing with regard to its help provided to affordable housing developers to-date, indicating the employees involved and activities undertaken.
- c. State with specificity the PV purchase and installation cost subsidy amounts, rules and other terms and conditions that are proposed by HELCO.
- d. Using the information from the response to parts (a) and (c) of this information request, please provide projections of the anticipated monthly volumes of transactions and HELCO costs under the planned PV subsidization arrangements.
- e. Explain whether HELCO is proposing any changes to its net energy metering tariff or how its personnel explain and promote the use of the net energy metering tariff as part of REEPAH.
- f. At page 9, line 8, Mr. Beck states that, "The customer assistance program would provide qualifying participants with a net metering audit at no cost to the customer." Please explain how these audits would be performed and provide the estimated contractor or HELCO estimated labor costs that are to be incurred in future years to perform such audits (as available).

HELCO's Response:

- a. HELCO does not know how many new potential sites there are for small commercial PV systems, as this number would depend in part on the number of commercially-metered buildings that would be constructed in each affordable housing project. HELCO, in its discussions with the County of Hawaii for the Waikoloa Employee Housing Project, is seeking a proposal from the County for renewable energy facility installations.
- b. HELCO has been communicating by phone and meeting with representatives from the County of Hawaii and its contractor, UniDev, LLC ("UniDev"). Meetings were held on May 23, 2006 and on July 5, 2006. HELCO also met with the project architect, McLarand,

Vasquez, Emsieck & Partners (“MVE Partners”) on August 28, 2006 at UniDev’s Honolulu office. To-date, discussions have focused on providing information that supports planning for ENERGY STAR® or “Built Green” compliance for residential buildings, by reviewing and critiquing energy efficiency components and measures. Renewable energy installations have not been discussed with specificity.

- c. HELCO envisions that assistance for solar PV energy facilities would be provided under a grant format, and has drafted preliminary REEEPAAH rules that would be applicable to renewable energy facilities such as PV. See HELCO’s response to CA-IR-242, pages 3 through 7.
- d. HELCO does not have such projections, and does not anticipate it will be able to develop them until the County puts forth a proposal for the renewable energy facilities it intends to pursue in the Waikoloa Employee Housing project.
- e. HELCO is not proposing any changes to its net energy metering tariff as a result of its potential application within affordable housing projects. The net energy metering tariff option would not be an actual element of REEEPAAH. HELCO envisions that an affordable housing developer may acquire ownership or lease of a renewable energy generating facility with the assistance of a REEEPAAH renewable energy assistance grant. The renewable energy facility so acquired would be eligible for the net energy metering tariff just as it would for any other customer.
- f. Please see HELCO’s response to CA-IR-242, pages 8 and 9, for a draft of a Net Energy Metering (NEM) Customer Assistance Program, which outlines the components of a customer site assessment (“audit”). Program cost estimates are based on a one-time development cost of \$50,000 for a web-based calculator/estimator, annual administrative

costs of \$50,000, and 150 customer audits annually at a cost of \$1,000 each. The estimate of 150 audits per year is a rough estimate, based on the participation to-date in a similar program in the state of Wisconsin, as described on page 9 to HELCO's response to CA-IR-242.

CA-IR-354

Ref: T-8, page 10; HELCO Involvement with CHP.

At page 10 of his testimony, Mr. Beck refers to, "combined heat and power activities." Please provide the following information:

- a. What is the history and status of CHP installations within HELCO's service territory and how have such installations impacted test year KWH sales and demand levels?
- b. Please itemize and describe the costs "from account 921" and explain why a reclassification is required.
- c. Provide a breakdown of the test year projected expenses and rate base impacts, if any, associated with HELCO's involvement in CHP projects.

HELCO Response:

- a. HELCO has had five customers with CHP installations to-date. Currently, only two customers have operational CHP systems as the other three customers have shutdown their systems. The two existing CHP systems have been in operation since February 2003 and April 2004. HELCO does not have test year estimates of sales and demand impacts, but has estimates for the 12-month period ending July, 2006. The estimated total annual impact to KWH sales is 5.7 million KWH, and the average monthly demand reduction is 0.65 MW. Estimated annual lost revenues due to reduction in KWH sales and demand due to the CHP installations is \$445,828.
- b. Expenses for combined heat and power activities (CHP) of \$75,000 were reclassified from account 921 – Office Supplies and Expenses to Customer Service Expense. The administrative group of expenses represents the expenses incurred in connection with the general administration of the Company's operations that are not chargeable against other specific functional accounts. HELCO felt that CHP activities represented a Customer Service Expense and did not belong in Account 921. The costs are for support that HELCO will provide HELCO to engineer, design and manage CHP projects.

- c. There are no utility CHP projects expected to be completed in 2006, and no rate base impacts. The only expenses that will be incurred are for HECO support, with the following breakdown:

550 Intercompany Charges	\$13,226.88
501 Outside Services - General	\$ 450.00

CA-IR-355

Ref: T-8, page 12; Account 910 Labor Expense Increases.

At page 12 of his testimony, Mr. Beck explains the growth in proposed test year account 910 labor, stating, "a new Commercial Account Manager position was added." Please provide the following information:

- a. State the starting date of the new employee in this position.
- b. Confirm that an adjustment was made for this position, as more fully explained at T-8 page 28 to remove ½ of the annual labor costs because the position was not filled until mid-year.
- c. Explain why the costs for this position were not annualized by HELCO, as if the position had been filled throughout the test year.

HELCO Response:

- a. September 27, 2006. However, the other two Commercial Account Manager positions, in the Hilo and Waimea offices, are temporarily vacant, and efforts are underway to re-fill these positions.
- b. An adjustment was made to remove ½ of the annual labor costs of the new Commercial Account Manager position.
- c. Please see the discussion in HELCO T-8, pages 28 to 29.

CA-IR-356

Ref: HELCO-805 and T-8, page 12; Account 910 Labor Expense Increases.

At page 12 of his testimony, Mr. Beck explains the growth in proposed test year account 910 labor over 2005 actual labor expenses, stating, "The Energy Services Analyst position became vacant in March 2005 and was filled in November 2005 and the Administrative Aide position became vacant in July 2006 and was filled in October 2006." Please provide the following information:

- a. Explain how the Administrative Aide position could have been filled in October 2006 when this is only the first full week of September 2006.
- b. State whether the test year labor expense forecast assumed that any vacancies will occur in the normal course of business (other than the \$33,000 downward adjustment for delayed filling of the new position).
- c. Please expand HELCO-805 to include quarterly actual headcount data indicating the filled positions for the RA=EA, EB and ES authorized positions in each year 2000 through June 30, 2006.
- d. Explain how HELCO and its customers are impacted by vacancies within the customer service RAs and provide examples of work that was not completed because of the vacancies noted in the response to part (b) of this information request.

HELCO Response:

- a. The sentence in question should have read "The Energy Services Analyst position became vacant in March 2005 and was filled in November 2005 and the Administrative Aide position became vacant in June 2005 and was filled in October 2005."
- b. The test year labor expense forecast assumed that no vacancies would occur in the normal course of business.
- c. The quarterly actual and forecasted headcount data for the Energy Services Divisions of "EA, EB, and ES" are included in HELCO's response to CA-IR-9 for the years 2002 through June 30, 2006. Please note that prior to 2005, these Energy Services Divisions were included in the Customer Services Department with the equivalent responsibility area codes of: EA = CA, EB = CB, and ES = CS. Please also refer to CA-IR-9 for HELCO's response concerning requests for "authorized positions." For the quarterly actual and forecasted

headcount for responsibility areas "EA, EB, and ES" for the years 2000 and 2001, please see Pages 4 and 5.

- d. HELCO and its customers are impacted both directly and indirectly by position vacancies in the level of service they receive. Generally, based on the work that must be accomplished, projects, nonrecurring activities and normal day-to-day activities are prioritized, certain work may be performed on an overtime basis or deferred, or by extra time without pay by merit employees. Service to customers becomes less proactive and more reactive, a condition which becomes less sustainable over time and may contribute to less customer satisfaction with the services received. In the case of the Energy Services Analyst position vacancy (RA=EB) in 2005, the most significant concern was for the residential DSM program. To compensate, an Agency Temporary was hired to handle customer requests, address contractor issues, and process co-payment applications, with assistance from the Administrative Aides. The IRP/Energy Services Administrator (RA=EB), who having formerly held the Energy Services Analyst position was familiar with the work, assumed some of the administrative duties of the Energy Services Analyst while the position was vacant. This had a secondary impact in that the IRP/Energy Services Administrator could not spend as much time administering the ongoing IRP-3 process. IRP marketing activities were also deferred, with possible negative impacts on public awareness of DSM programs. While the Energy Services Analyst position was vacant, HELCO had difficulty monitoring the solar contractors, and supervising its solar inspectors. This resulted in solar system installations that did not conform to the program's Standards and Specifications, as well as contractor conduct that did not comply with the Customer Efficiency Program Contract, matters of which HELCO was unaware until the Energy Analyst position was re-filled and

full oversight resumed. For example, HELCO found that some contractors installed insufficient structural supports for roof-top solar collectors, did not install sufficient fasteners to anchor the collectors to the roof, and did not install all of the required valves and plumbing hardware or used non-approved materials. In some cases, contractors failed to submit complete documentation of their installations as required by their contract, did not undertake timely corrective measures when deficiencies were pointed out, and did not gain HELCO's approval before running advertisements that mentioned the REWH Program. In the process of engaging mis-performing contractors to correct their mistakes and their work that was not in compliance with REWH program rules, program participants began to suffer consequences such as inspection backlogs and contractor disputes. In some cases, contractors were required to perform additional construction work to correct their deficient installations, in others they were required to submit an architect's drawings to demonstrate compliance with REWH construction requirements. HELCO also made additional inspections using its own employees, fired its offending inspectors and hired new ones. When the Administrative Aide position (RA=EB) became vacant in July, 2005, certain clerical duties such as filing were deferred, phone-answering duties were shared, and department staff provided more of their own clerical support. With less clerical support, customers encountered delays in the timely processing of commercial DSM incentive applications. Other customer impacts, though difficult to quantify, were generally due to less timely response to inquiries and deferred marketing activity. The Commercial Account Manager vacancies (RA=ES) that were experienced in 2006 impacted key customer accounts in that not all of the planned customer assistance activities will be able to be completed in 2006. Also, the collection of customer energy use outlook information that

forms the basis of the sales forecast market analysis was hindered, so the Schedule P forecast for 2007 will have to rely more heavily on the sales trending models and less on specific knowledge of individual customers' usage. To compensate, the Commercial Services Administrator (RA=ES), the Market Services Representative (RA=CS), and the Energy Services Department Manager (RA=CA) handled the most urgent communications with key customers, with the limited assistance of Commercial Account Managers from HECO. Finally, in times of system emergencies, most notably the earthquake of October 15, 2006, the vacant Commercial Account Manager positions resulted in fewer and less timely communications with commercial customers during the critical service restoration phase of the emergency.

Actual Headcount as of End of Calendar Quarter

YEAR 2000

	<u>Origin</u>	1st Qtr. ending 3/31/00	2nd Qtr. ending 6/30/00	3rd Qtr. ending 9/30/00	4th Qtr. ending 12/31/00
<u>CUSTOMER SERVICE</u>					
<u>Account 909 - Supervision</u>					
Manager, Customer Services	CA	1	1	1	1
<u>Account 910</u>					
Administrator, IRP/Energy Services	CB	1	1	1	1
Energy Services Analyst	CB	1	0	1	1
Administratives Aides	CB	2	2	2	2
Data Analyst	CB	1	1	1	1
Educational Services Coordinator	CE	1	1	1	1
Administrator, Commercial Services	CS	0	0	1	1
Market Services Representative	CS	0	1	1	1
Commercial Account Manager	CS	1	0	0	1
Total Customer Service		8	7	9	10

Forecast Headcount as of End of Calendar Quarter

YEAR 2000

	<u>Origin</u>	1st Qtr. ending 3/31/00	2nd Qtr. ending 6/30/00	3rd Qtr. ending 9/30/00	4th Qtr. ending 12/31/00
<u>CUSTOMER SERVICE</u>					
<u>Account 909 - Supervision</u>					
Manager, Customer Services	CA	1	1	1	1
<u>Account 910</u>					
Administrator, IRP/Energy Services	CB	1	1	1	1
Energy Services Analyst	CB	1	0	1	1
Administratives Aides	CB	2	2	2	2
Data Analyst	CB	1	1	1	1
Educational Services Coordinator	CE	2	2	2	2
Administrator, Commercial Services	CS	0	0	1	1
Market Services Representative	CS	0	1	1	1
Commercial Account Manager	CS	1	1	1	1
Total Customer Service		9	9	11	11

Actual Headcount as of End of Calendar Quarter

YEAR 2001

	<u>Origin</u>	1st Qtr. ending 3/31/01	2nd Qtr. ending 6/30/01	3rd Qtr. ending 9/30/01	4th Qtr. ending 12/31/01
<u>CUSTOMER SERVICE</u>					
<u>Account 909 - Supervision</u>					
Manager, CustomerServices	CA	1	1	1	1
<u>Account 910</u>					
Administrator, IRP/Energy Services	CB	1	1	1	1
Energy Services Analyst	CB	1	1	1	1
Administratives Aides	CB	2	2	2	2
Data Analyst	CB	1	1	1	1
Educational Services Coordinator	CE	1	1	1	1
Administrator, Commercial Services	CS	1	1	1	1
Market Services Representative	CS	1	1	1	1
Commercial Account Manager	CS	2	2	2	2
Total Customer Service		11	11	11	11

Forecast Headcount as of End of Calendar Quarter

YEAR 2001

	<u>Origin</u>	1st Qtr. ending 3/31/01	2nd Qtr. ending 6/30/01	3rd Qtr. ending 9/30/01	4th Qtr. ending 12/31/01
<u>CUSTOMER SERVICE</u>					
<u>Account 909 - Supervision</u>					
Manager, CustomerServices	CA	1	1	1	1
<u>Account 910</u>					
Administrator, IRP/Energy Services	CB	1	1	1	1
Energy Services Analyst	CB	1	1	1	1
Administratives Aides	CB	2	2	2	2
Data Analyst	CB	1	1	1	1
Educational Services Coordinator	CE	1	1	1	1
Administrator, Commercial Services	CS	1	1	1	1
Market Services Representative	CS	1	1	1	1
Commercial Account Manager	CS	2	2	2	2
Total Customer Service		11	11	11	11

CA-IR-357

Ref: HELCO-WP-801, page 14; Customer Service Non-labor Expense Adjustments.

Please explain the approach taken to evaluate customer service project plans and to develop the proposed adjustments. In addition, please provide the following information:

- a. Provide a descriptive listing of all of the assumptions and calculations involved in developing the initial forecasted amounts shown on this workpaper.
- b. Provide a more detailed description of each of the listed "Proposed Projects-2006" that are requested for test year inclusion by HELCO after the recommended forecast adjustments.
- c. Provide a year-to-date 2006 breakdown of the monthly actual expenditures for each of the projects listed in the workpaper and in response to part (b) of this information request, indicating the reasons for any significant departures from the planned activities.

HELCO Response:

HELCO believes that the Consumer Advocate's reference should have been to page 11 of HELCO-WP-801. The Commercial Services Division of the Energy Services Department has the responsibility to develop and evaluate customer service project plans for HELCO's key customer accounts. HELCO's general approach begins with the Commercial Account Managers who maintain professional consultative relationships with these key customers. The Commercial Account Managers discuss with these customers their needs and concerns regarding the quality of electric power and the efficiency of their electric energy use. They then develop and present workable engineering solutions that help customers meet their business goals. In some cases a defineable customer service project emerges from this consultative process that requires a more thorough investigation involving the use of outside resources. The Commercial Account Managers may then work with the Commercial Services Administrator to locate suitable resources such as engineering consultants, equipment vendors, or other trade allies, and obtain cost estimates to perform the work and issue a report to HELCO and the customer.

Specific solutions and opportunities such as energy efficiency, rate options, new

electrotechnologies, combined heat and power systems (CHP), and energy storage, may be bundled into projects that can be financed and installed by HELCO and/or its trade allies on behalf of the customer.

Customer service projects may be developed at any time during the year, but much of the development work as possible takes place early in the calendar year so that there is sufficient time to implement the projects within the current year. The adjustments shown on page 11 of HELCO WP-801 are the result of HELCO's assessment, at the time of the filing of HELCO's testimony in the current rate case, of the customer service projects that its Commercial Services Division estimated it would be able to complete during 2006. The total adjustment represents the 2006 operating budget amount less the total estimated costs for the projects to be implemented.

- a. These amounts were reasonable to provide support to customers in the area of energy efficient technologies and to meet customers' needs for increased service reliability and power quality. In preparing its operating forecast for 2006, which was done in July, 2005, HELCO can only anticipate what the customers' needs may be in the coming year and does not know with any certainty what the opportunities and costs will be. HELCO made no a priori assumptions in developing the initial forecasted amounts. Rather, HELCO made some educated guesses as to the appropriate budget amounts, using the following considerations:

Electrotechnologies: HELCO continually seeks opportunities to introduce new electrotechnologies that have the potential to benefit its commercial customers. Projects may involve an engineering study or an actual demonstration of equipment. HELCO does not know when an opportunity will arise to demonstrate a promising electrotechnology, because the timing depends not only on the introduction of these technologies to the

marketplace but also on the interest of the customer to participate and apply the technology to its operations. Because of this, HELCO does not anticipate more than one such opportunity in a given year. HELCO may, depending on the nature of the opportunity, if any, spend more or less than the budgeted amount, but will strive to design a project's size such that its cost is consistent with the budget.

Technical support: HELCO is prepared to provide technical support to its customers on an as-needed basis to develop engineering solutions to customer problems that impact service reliability, power quality, and energy efficiency. As with electrotechnologies HELCO does not know when its customers will request technical support, nor can it anticipate the nature and extent of the support needed. Customers usually request support because of a lack of expertise or resources to deal with a problem. HELCO will locate and engage the expertise needed to address the customer's need, either by utilizing technical resources from HECO (EE=550; see HELCO WP-803, pages 12 and 13, Intercompany Service Form) or contracting with an outside technical consultant (EE=501) for the work. The budgeted amounts were reasonable to assist one or two customers per year, if needed, to thoroughly evaluate a given problem(s) and develop appropriate technical solutions.

Customer assistance: HELCO's Commercial Account Managers work to ensure that its commercial customers continue to use electricity efficiently as their primary energy source. Key customer service projects may include comprehensive preliminary energy assessments or technology-specific feasibility studies that will identify opportunities, such as using electricity more efficiently, and lowering the customer's energy bills. In recent years HELCO has sought to become a provider of distributed generation (DG) services, such as combined heat and power (CHP) systems. However, as recent regulatory developments

have made it less likely that HELCO will be able to provide DG services, the need for customer assistance projects will increase in the coming years. HELCO cannot anticipate specific customer assistance needs, however it feels that the budgeted amount is reasonable given the trend of higher energy prices which will continue to provide incentives for customers to operate more efficiently.

- b. See the table on Page 5 of this response for a more detailed description of the customer service projects requested for inclusion in the test year expense.
- c. See the table on Page 5 of this response for YTD expenses for the customer service projects requested for inclusion in the test year expenses, and explanations for significant departures from the planned activities.

HAWAII ELECTRIC LIGHT COMPANY, INC.
CUSTOMER SERVICE PROJECTS

Project Description	Proposed TY2006	YTD October, 2006 expenditure, reason(s) for variance
HES 102 HEL NE NHEZZZZ 501 Electro Technologies, Acct 910:		
Heat Pump for DHW and Pool - study the use of water-source heat pump electrotechnology for domestic hot water and solar heating for swimming pool. The heat pump would also increase the efficiency of the existing chiller. Compare economics of solar heating with condenser water heat recovery for pool heating. (site: Sheraton Keauhou Bay Resort)	10,000	3,000 Project not yet completed
Microplanet Voltage Regulator (site undecided) - demonstrate proprietary voltage regulator electrotechnology at customer site, which has potential to mitigate low-distribution voltage situations and improve reliability.	5,000	Deferred, pending identification of suitable site.
HES 110 HEL NE NHEZZZZ 501 Technical Support, Acct 910:		
Transformer Loading Study (Mauna Kea Beach Hotel) - provide technical support to customer with dual transformer installation . Facility load growth over the years has resulted in reduction of back-up capability. Study would seek engineering solutions to un-load the transformers and restore back-up transformer reliability.	15,000	4,500 Project not yet completed.
Transformer Loading Study (site TBD) - similar technical support transformer load study at a customer site to be determined.	9,000	Deferred, pending identification of suitable site.
HEA 110 HEL NS H000528 501 Commercial Customer Assistance, Acct 910:		
Feasibility Study Refrigeration (KTA-Puainako) - Assist customer to evaluate their entire store-wide refrigeration systems, provide feasible engineering solutions to improve performance, efficiency, and cost-effectiveness, supporting their corporate business goals.	9,100	9,127
Feasibility Study Refrigeration (KTA-Keawe) - Assist customer to evaluate their entire store-wide refrigeration systems, provide feasible engineering solutions to improve performance, efficiency, and cost-effectiveness, supporting their corporate business goals.	5,077	5,077
Solar Thermal Pool Heating (UH-Hilo) - assist customer to evaluate use of environmentally-friendly elastomeric black rubber mats to heat swimming pool water as a cost-effective alternative to combined heat and power waste heat systems.	10,000	Deferred, pending refilling vacant Commercial Account Manager position
Solar Thermal Pool Heating (Mauna Kea Beach Hotel) - assist customer to evaluate use of environmentally-friendly elastomeric black rubber mats to heat swimming pool water as a cost-effective alternative to combined heat and power waste heat systems.	10,000	Deferred, pending refilling vacant Commercial Account Manager position
Solar Thermal Pool Heating (Hapuna Beach Prince) - assist customer to evaluate use of environmentally-friendly elastomeric black rubber mats to heat swimming pool water as a cost-effective alternative to combined heat and power waste heat systems.	10,000	Deferred, pending refilling vacant Commercial Account Manager position
Solar Thermal Pool Heating (Marriott) - assist customer to evaluate use of environmentally-friendly elastomeric black rubber mats to heat swimming pool water as a cost-effective alternative to combined heat and power waste heat systems.	10,000	Deferred, pending refilling vacant Commercial Account Manager position
Feasibility Study- Energy Assessment Update Study (Hilton Waikoloa Village) - assist customer to document energy-efficiency opportunities which supports Rule 4D customer retention contract requirements.	Unbudgeted	5,000
TOTAL	93,177	21,704

CA-IR-358

Ref: T-8, page 14; Customer Service Seminars, Surveys, and Meetings.

At page 14 of his testimony, Mr. Beck refers to, "Periodic seminars, surveys and focus group meetings [that] are organized and presented to customers." Please provide a descriptive listing of such activities that occurred in 2005 and 2006, to-date.

HELCO's Response:

A descriptive listing of activities that occurred in 2005 and 2006 to-date is in the following table:

Date	Location	Description
September 29 – October 1, 2005	Hilton Waikoloa Village Resort	Pacific Coast Electrical Association Conference and Expo – sponsored jointly by HECO, HELCO and MECO. Seminars available to customer-attendees on commercial energy efficiency, load control, and renewable energy.
December 15, 2005	Mid-Level Facility, Hale Pohaku, Mauna Kea	Informal workshop with members of Mauna Kea Observatories Support Services Oversight Committee – HELCO presented information and participated in a dialogue with key customers of the astronomy industry on emergency procedures in service outages on the Mauna Kea summit area, and electricity pricing information.
July 22, 2006	Mauna Kea Beach Hotel	Vista Lighting presentation – HELCO and trade ally presented information on energy-efficient landscape lighting and DSM incentive programs available for such opportunities.

HELCO has two additional activities planned in 2006. HELCO plans to host its 2006 Business and Economic Outlook Forum on November 1, 2006, in Hilo. HELCO will present information on the Big Island's economic outlook for 2007, including electricity pricing information that will help businesses to manage their energy budgets, and in return will seek input from participants

on their economic outlooks that will help HELCO develop its 2007 electricity sales forecast. Also, the Efficient Electro-Technology Expo & Conference, jointly sponsored by HECO, HELCO, and MECO, will be held in Honolulu on November 29, 2006. Seminars will be available to customer-attendees on commercial energy efficiency, load control, and renewable energy.

CA-IR-359

Ref: T-8, page 17; IRP Expenses.

At page 17 of his testimony, Mr. Beck states, "This adjustment recognizes that expenses for IRP vary from year-to-year. Although in 2006 HELCO anticipates higher than normal IRP expenses, the 2006 budget as reduced by \$117,000 is representative of the average expenses over the past five years. It also corresponds to the PUC approved amount of \$450,000 in HELCO's last rate case..." Please respond to the following:

- a. Provide reference into the workpapers that calculate the amount by which, "in 2006 HELCO anticipates higher than normal IRP expenses."
- b. Explain whether only non-labor expenses are treated as "IRP expenses" by the Company.
- c. Is HELCO-WP-801, page 8 what is relied upon to conclude that the \$450,000 after adjustment is "representative of the average expenses over the past five years?" If not, please provide additional calculations and documents (or workpaper references) associated with the response.
- d. Explain whether any deferral/amortization accounting is proposed or practiced by HELCO with respect to the labor or non-labor IRP expenses.
- e. Explain how/if IRP expenses included in base rates are isolated on HELCO books to avoid duplicate recovery through IRP/DSM tariff tracking mechanisms.

HELCO Response:

- a. Workpaper HELCO-WP-801, page 8, reflects the calculation of the \$567,234 included in the 2006 budget for non-labor IRP expenses that were formerly recovered through the IRP Cost Recovery Provision as incremental IRP expenses.
- b. Labor and non-labor expenses are included as IRP expenses, and are charged to Activity 711 - Administer and Implement IRP Programs - Base."
- c. Yes.
- d. There is no deferral/amortization accounting proposed or practiced by HELCO with respect to IRP labor or non-labor expenses.
- e. IRP expenses included in base rates are isolated on HELCO books to avoid duplicate recovery through IRP/DSM tracking mechanisms. IRP expenses are charged to a different activity (Activity 711) than the activity (Activity 714) to which DSM expenses recovered

through the IRP Cost Recovery Provision are charged. Labor and non-labor IRP expenses included in base rates are charged to Activity 711 - Administer and Implement IRP Programs - Base. DSM expenses that are recovered through the IRP Cost Recovery Provision are charged to Activity 714 - Administer and Implement DSM Programs - Incremental. There are no IRP expenses that are recovered through the IRP Cost Recovery Provision."

CA-IR-360

Ref: T-8, page 23 and HELCO-WP-803, pages 47-52; DSM Expenses.

At page 23 of his testimony, Mr. Beck states, "Through its DSM programs, HELCO makes available financial incentives to both commercial and residential customers, in both existing and new facilities, to assist customers to utilize energy-efficient equipment. HELCO has sponsored energy efficiency workshops and seminars in the past, and provides customized consultation to customers that facilitate the development and implementation of energy conservation measures (ECM's) at customer sites. In addition, HELCO has many educational programs for its residential customers on energy conservation, energy efficiency and electrical safety." Please respond to the following:

- a. List and describe each form of "financial incentives to both commercial and residential customers" that HELCO has made or plans to make available in 2006, indicating which are treated as DSM incremental expenses versus base rate recoverable non-DSM expenses.
- b. List and describe each form of "energy efficiency workshops and seminars" that HELCO has made or plans to make available in 2006 (by annotation to the WP-803 narrative if appropriate), indicating which are treated as DSM incremental expenses versus base rate recoverable non-DSM expenses.
- c. List and describe each type of recurring "customized consultation to customers" that HELCO has made or plans to make available in 2006 (by annotation to the WP-803 narrative if appropriate), indicating which are treated as DSM incremental expenses versus base rate recoverable non-DSM expenses.
- d. List and describe each form of "educational program for its residential customers on energy conservation, energy efficiency and electrical safety" that HELCO has made or plans to make available in 2006 (by annotation to the WP-803 narrative if appropriate), indicating which are treated as DSM incremental expenses versus base rate recoverable non-DSM expenses.

HELCO response:

- a) HELCO currently only provides financial incentives for energy efficient equipment through its four approved DSM programs: the Residential Efficient Water Heating (REWH) Program, the Commercial and Industrial Energy Efficiency (CIEE) Program, the Commercial and Industrial New Construction (CINC) Program, and the Commercial and Industrial Customized Rebate (CICR) Program. Please refer to HELCO T-8, page 18, lines 15-25 through page 19, line 1, for a list and description of the four approved DSM programs through which financial incentives have been made available to customers in 2006. All of the financial

incentives are in the form of direct cash payments to customers for the installation of qualifying efficient electric equipment, and all are treated as DSM incremental expenses.

b) In 2006, Hawaii Electric Light Company will co-sponsor, along with Maui Electric Company and Hawaiian Electric Company, the Efficient Electro-Technology Expo & Conference – to be held on November 29, 2006 at the Hawaii Convention Center. This event will offer a program of energy efficiency seminars to the commercial and industrial customers of all three companies who attend. HELCO's expenses to both sponsor and participate in the conference will be treated as DSM incremental expense.

c) In 2006, HELCO provided two types of customized consultation to customers related to DSM. The first type is called an "Energy Efficiency Assessment", and it is treated as a DSM incremental expense. The second type is called "Customer Assistance" is treated as a non-DSM expense. Please refer to HELCO T-8, pages 13 and 14 where a description of the types of Customer Assistance provided by HELCO's commercial services division is provided. The following table summarizes the specific customized consultation activities being undertaken in 2006:

Customer	Description	DSM Incremental Expense	Base Rate Recoverable Non-DSM Expense
KTA Superstores	Evaluate refrigeration systems for energy efficiency at Puainako Street store.		✓
KTA Superstores	Evaluate refrigeration systems for energy efficiency at Keawe Street store.		✓
Mauna Kea Beach Hotel	Investigate Transformer Load Reduction to Improve Reliability		✓

Sheraton Keauhou Bay Resort	Assess feasibility of heat pump electrotechnology for domestic hot water production		✓
Hilton Waikoloa Village Resort	Energy Assessment		✓
Hilton Waikoloa Village Resort	Evaluate dimmable compact fluorescent lamp performance in hotel application.	✓	
KTA Island Gourmet Market	Design assistance for energy efficiency design in new construction.	✓	

d) The following table on pages 4 and 5 lists and describes HELCO's educational programs for 2006 in the areas of energy conservation, energy efficiency, and electrical safety. The table correlates to HELCO-WP-803, pages 47 and 48, section heading "School & Community Energy Education Activities". All of the listed programs are treated as base rate recoverable non-DSM expenses.

School & Community Energy Education Activities		Continued in 2006	New in 2006
1 Energy Exhibitions			
	HELCO In Our Community Energy Fair	✓	
	Journey Through the Universe	✓	
	Ellison Onizuka Science Day		
	Hawaii Instructional Material Association Exposition		
	HCC/UHH Earth Day	✓	
	Discovery Day at Keauhou Shopping Center	✓	
	Credit Union Hawaii Annual Meeting		
	Astro Day		
	Career Day at various schools	✓	
	Boy Scouts of America Aloha Council Makahiki		
	Keahole Power Plant Dedication Ceremony		
	Main Office lobby display	✓	
	Customer Information Center	✓	
	American Heart Association Community Educational Fair		✓
	Kamehameha Health & Fitness Fair		✓
	Community Emergency Preparedness Fair		✓
	Hawaii Island Chamber of Commerce Agriculture & Energy Expo		✓
	Hawaii State Teacher's Association Teacher's Institute Educational Fair		✓
2 Schools			
	Resource Center/Video Library	✓	
	Presentations - provided presentations for public and private schools, pre-schools, and summer school programs	✓	
	Hawaii Regional Science Bowl - science competition	✓	
	Electron Marathon - electric car program	✓	
	Hawaii District Science and Engineering Fair	✓	
	Sun Power for Schools Solar Sprint Exhibition - solar car program	✓	
3 Community			
	Presentations - provide presentations by request	✓	

School & Community Energy Education Activities		Continued in 2006	New in 2006
4	American Energy Month		
	HELCO In Our Community Energy Fair - also listed above, under Item #1 Energy Exhibitions	✓	
5	Customer Assistance		
	Informational booklets & materials	✓	
	Low Income Housing Energy Assistance Program	✓	
6	Solar Electric/Wind Trailer		
	Presentations for schools & community	✓	
7	The Electric Kitchen		
	Consumer Line Monthly Recipe feature	✓	
8	Public Outreach		
	Advertisements & articles	✓	
	Radio spots and public service announcements	✓	
	Living In Paradise		
	Metallic Balloon Campaign		✓
	Community Forum - Public talk radio		✓

CA-IR-361

Ref: HELCO-WP-918 & Response to CA-IR-116 (Standard Labor Rates).

Pages 2-7 of the response to CA-IR-116 contain actual 2004 hours and payroll dollars, by labor class, supporting HELCO-WP-918. Using the BUOC labor class for illustration purposes, please provide the following:

- a. Please confirm that the hours (75,038) and dollars (\$1,701,123) identified as "regular earnings" (Tran_Code 001) include both productive straight time and non-productive (vacation, sick leave, jury duty, etc.) time.
- b. If this cannot be confirmed, please provide a detailed explanation of the pay types included in "regular earnings."
- c. If the response to part (a) above confirms that "regular earnings" include non-productive time, please explain why the entire 75,038 "regular" hours were included in the "prod hrs" column.
- d. If the response to part (a) above indicates that "regular earnings" do not include non-productive time, please identify each "Tran_Code" that does include non-productive pay and hours.

HELCO's Response:

- a. The hours (75,038) and dollars (\$1,701,123) identified as "regular earnings" (Tran_Code 001) include only productive straight time and excludes non-productive (vacation, sick leave, jury duty, etc.) time.
- b. See response to item a. above.
- c. Not applicable. See response to item a. above.
- d. The transaction code listing is attached. Non-productive codes are 30 – 85. There are no transaction codes 30 – 85 shown on HELCO's response to CA-IR-116, pages 2 – 7.

EARNINGS TABLE

CA-IR-361
DOCKET NO. 05-0315
PAGE 2 OF 6

Code	Long Description	Short (12 ch) Description
001	Regular Earnings	Regular
002	Variable Merit	Variable
003	Instructor	Instructor
004	Extra Straight Time @ 1.0	Ext Straight
005	1.5 OT for Merit Non Exempt	1.5-MeritNE
006	Salary Pay	Salary Pay
007	ABR OT inside Roster @1.5	ABR OTin @1.5
008	Pre/Post Roster OT @1.5	Pr/Po OT @1.5
009	Pre/Post RosterOT@2.0	Pr/Po OT @2X
012	Special Project EST-Mexempt	SpecProj EST
013	Extra Straight-Merit Exempt	MB15 EST
014	Extra Straight-Merit Exempt	Mexempt EST
015	Call-out OT @ 1.5	C/O OT @ 1.5
016	Call-out OT @ 2.0	C/O OT @ 2.0
017	Scheduled OT @ 1.5	Sch OT @ 1.5
018	Scheduled OT @ 2.0	Sch OT @ 2.0
020	Cancel OT Pen 2hr EST	Cancel OT P
021	Penalty @ .5X	Penalty @.5
023	Penalty @ 1X	Penalty @1X
024	C/O Meal Time Pen @ 1.5	C/O Ml T@1.5
025	C/O Meal Time Pen @ 2.0	C/O Ml T@2X
030	Emergency Vacation	EmergencyVac
031	Vacation	Vacation
032	Vacation - FMLA	VacationFMLA
033	Vacation Pay Off	Vac Pay Off
034	Vacation Pay Unpaid	Vac Pay Off-NP
035	Holiday	Holiday
036	Holiday Worked	Holi-Worked
039	Sick>6mo - current Balance	Sick->6mo
040	Sick - (Incl.Partial Day)	Sick
041	Sick-Chronic-FMLA	Sick-FLMA
042	Sick - Sent Home	Sick-SentHom
043	Sick Temp Disability Ins	Sick-TDI
044	Retro Sick 1 < 6 months	Sick R1<6mo
045	Retro Sick 2 < 6 months	Sick R2<6mo
046	Retro Sick 1 > 6 months	Sick R1>6mo
047	Retro Sick 2 > 6 months	Sick R2>6mo
048	Sick - No pay	Sick No-Pay
050	Sick-Payoff	Sick-Payoff
051	Retro Sick 1 Payoff	Sick 1-Payoff
052	Retro Sick 2 Payoff	Sick 2-Payoff
060	Industrial Injury - Paid	Ind Inj Paid
061	Industrial Inj > 6 mo	Ind Inj>6MO
062	Industrial Injury - Unpaid	Ind Inj NOPY

EARNINGS TABLE

CA-IR-361
DOCKET NO. 05-0315
PAGE 3 OF 6

Code	Long Description	Short (12 ch) Description
063	Industrial Injury - Cash Adj.	Ind Inj ADJ
064	Ind Inj - Cash Adj.> 6mo	Ind Inj ADJ>6mo
070	L.O.A. - Paid- Personal	LOA-PD-Pers.
071	L.O.A. - Paid- Jury Duty	LOA-PD-Jury
072	L.O.A. - Paid- Physical	LOA-PD-Phys.
073	L.O.A. - Paid-Blood Donate	LOA-PD-Blood
074	L.O.A. - Paid-Family Death	LOA-PD-Fdth.
075	L.O.A. - Paid-Military Leave	LOA-PD-Mili.
076	L.O.A. - Paid- Physical @OT	LOA-OT-Phys.
080	L.O.A. -NOPay-Ex. Absence	LOA-ExcNOPay
081	L.O.A. -NOPay-Unauthorized	LOA-UnauthNP_
082	L.O.A. -NOPay-Suspension	LOA-SusNOPay
083	L.O.A. -NOPay->30 Days	LOA->30DayNP
084	L.O.A. -NOPay-Fam/Med/Lv.	LOA-F/MLveNP
085	L.O.A. -NOPay-Military Lv.	LOA-Mil/LvNP
090	Training - Paid	Training-Pd
091	Training - Not Paid	Training-NP
092	Training - Overtime	Training-OT
094	Sheriff Pay	Sheriff Pay
095	Police - Pay	Police Pay
096	Police OT - HELCO	Police OT-HELCO
101	Differential - Helicopter	Helicopter
102	Differential - Height-HECO	Diff-Height
103	Differential-Height OT-HECO	Height OT
104	Differential - Chemicals OT	Chem OT
105	Do Not Use as of 3/15/05	Do Not Use
106	Differential - Standby	Standby
107	Differential - Standby OT	Standby OT
106	Differential - Standby	Standby
107	Differential - Standby OT	Standby OT
110	O/T Height 1.5	O/T Hght@.5
111	O/T Height 2	O/T Hght@1
112	Tower	Tower
113	Gas Turbine OT	Gas Turb OT
114	Gas Turbine	Gas Turbine
115	Leading Man	Leadingman
116	Leading Man OT	Leadman OT
117	Traveling Crew	Tvl Crew
118	Police Escort-HELCO	Escort-Helc
121	Meals	Meals
125	Higher Duty - Difference	Higher Duty
130	No Value Default Earnings	No Value
131	Merit Costed Hours-no value	Merit no value

EARNINGS TABLE

CA-IR-361
DOCKET NO. 05-0315
PAGE 4 OF 6

Code	Long Description	Short (12 ch) Description
135	TDI Allowance	TDI Allow
136	TDI Allowance > 6mo	TDI >6mo
151	Work Comp - PPD Fixed	WC-PPD-Fix
152	Work Comp - PPD Periodic	WC-PPD-1X
160	Adjustment-HEIRS	Adjustment
161	Adjustment- No Heirs	Adj-NoHeirs
190	Variable Merit - 2000	Var-2000
191	Variable Merit - 2001	Var-2001
192	Variable Merit - 2002	Var-2002
193	Variable Merit - 2003	Var-2003
194	Variable Merit - 2004	Var-2004
195	Variable Merit - 2005	Var-2005
196	Variable Merit - 2006	Var-2006
202	Shift 2 - Afternoon	Shift 2-aft
203	Shift 3 - Midnight	Shift 3-nit
204	Shift 4 - Sunday Day	Shift 4
205	Shift 5 - Sunday Afternoon	Shift 5-Sday
206	Shift 6 - Sunday Night	Shift 6-Snit
207	Shift 7 - 12hr night	Shift7-12nit
208	Shift 8 - 12hr Sunday	Shift8-12Sun
209	Shift 9 - 12hr Sun Nite	Shf9-12SuN
212	Shift 2 @ Afternoon OT	Shift 2 OT
213	Shift 3 @ NiteOT	Shift 3 OT
214	Shift 4 @ SunDay OT	Shift 4 OT
215	Shift 5 @ SunAftOT	Shift 5 OT
216	Shift 6 @ SunNiteOT	Shift 6 OT
217	Shf 7@12hr nite OT in Roster	S7-12nitOTin
218	Shf 8@12hr SuDay OT inRos	S8-12sdOTin
219	Shf 9@12hr SuNite OT in Rost	S9-12sdOTin
222	Shift 2 @ Afternoon DT	Shift 2 DT
223	Shift 3 @ Nite DT	Shift 3 DT
224	Shift 4 @ SuDay DT	Shift 4 DT
225	Shift 5 @ SuAft DT	Shift 5 DT
226	Shift 6 @ SuNite DT	Shift 6 DT
227	Shf 7@12hr nite OT out Rost	S7-12nitOTout
228	Shf 8@12hr SuDay OT outRos	S8-12sdOTout
229	Shf 9@12hr SuNite OT outRost	S9-12snOTout
232	Shift 2 @ .5X	Shift 2 @ .5X
233	Shift 3 @ .5X	Shift 3 @ .5X
234	Shift 4 @ .5X	Shift 4 @ .5X
235	Shift 5 @ .5X	Shift 5 @ .5X
236	Shift 6 @ .5X	Shift 6 @ .5X
237	Shf 7@12hr nite .5X out Rost	S7-12nit.5Xout
238	Shf 8@12hr SuDay .5X outRos	S8-12sd.5Xout
239	Shf 9@12hr SuNite .5X outRost	S9-12sn.5Xout
242	Shift 2 @ 1X	Shift 2 @ 1X
243	Shift 3 @ 1X	Shift 3 @ 1X

EARNINGS TABLE

CA-IR-361
DOCKET NO. 05-0315
PAGE 5 OF 6

Code	Long Description	Short (12 ch) Description
247	Shf 7@12hr nite DT out Rost	S7-12nitDTout
248	Shf 8@12hr SuDay DT outRos	S8-12sdDTout
249	Shf 9@12hr SuNite DT outRost	S9-12sndTtout
250	Vacation FABR	Vac-FABR
252	Vacation FABR- FMLA	Vac FABR-FMLA
253	Vacation Pay Off FABR	Vac Payoff-FABR
255	Holiday - EBR	Holiday-EBR
256	Holiday Worked - EBR	Holi-WorkeBR
262	ABR OT outRost@1.7154	ABR OT @1.7
263	ABR DT outRost@2.2871	ABR OT@2.2
271	Penalty ABR@.5684X	Pen ABR@.56
280	Sick EBR- (Incl.Partial Day)	Sick EBR
281	Sick EBR-Chronic-FMLA	SickeBR-FMLA
282	SickeBR - Sent Home	SickeBR-sent
284	Retro1 Sick EBR< 6 months	SR1 EBR<6m
285	Retro2 Sick EBR< 6 months	SR2 EBR<6m
286	Retro1 Sick EBR> 6 months	SR1 EBR>6m
287	Retro2 Sick EBR> 6 months	SR2 EBR>6m
288	Industrial Injury EBR- Paid	Ind Inj EBR
289	Ind Inj EBR> 6 mo	IInj EBR>6m
290	L.O.A. - Paid- Personal	LOA-PD-Pers.
291	L.O.A. - Paid- Jury Duty-EBR	LOA-Jury-EBR
292	L.O.A. - Paid- Physical-EBR	LOA-PhysEBR
293	L.O.A. - Paid-Blood EBR	LOA-BloodEBR
294	L.O.A.-Paid-Death-EBR	LOA-Death-EBR
295	L.O.A. -Paid-Military-EBR	LOA-Mil-EBR
301	Reimbursement for Meals	Meals-reimb
302	Vehicle [1st & 2nd pay]	Vehicle
303	Meter Tampering	Meter Tamp
304	ACE Awards	ACE
305	Special Pay'ts (bonus)	SPECIALPAY
306	Other Pay - Lfalls	Other Pay
307	Vehicle - 2nd pay	Vehicle 2ndp
310	Cash Advance	Cash Adv
311	Merit Key Contributor Award	MeritKEY Awd
312	Merit Team Awards	Merit Team
313	Ho'okina Awards	Hookina Awd
314	Safety Recognition	Safety Awd
320	TIP Bonus	TIP Gross
321	Exec Long Term Incent Plan	LTIP
322	Deferred - L T I P	DEFLTIP

EARNINGS TABLE

CA-IR-361
DOCKET NO. 05-0315
PAGE 6 OF 6

Code	Long Description	Short (12 ch) Description
323	Exec Incentive Cash Plan	EICP
324	Deferred - EICP	DEFEICP
325	Retired Deferred LTIP	RETLTIP
326	Retired Deferred EICP	RETEICP
327	Sup Exec Pension-HEI-Pratt	SERP-HEI
328	Sup Exec Pension-HECO-HDW	SERP-HECO (HDW)
329	Excess Plan Pension	Excess Plan
330	Imputed Inc-SERP for FICA	Impute-SERP
331	Excess Pay - No FICA	Excess Pay
334	Reimb Internet HEI - Taxable	ReimInternet
335	Reimb. for Classes - Taxable	VEA Tax.
336	Reimb. for Moving - Taxable	MOV Tax.
337	Reimb. for Adoption	ADOP Reimb
338	Reimb Prior Per Pretax Dedn	ReimbPriorDn
339	Remuneration BPL Demo House	BPL Remun
340	Reimb. for Classes - No Tax	VEA No Tax
341	Reimb. for Moving - No Tax	MOV No Tax
342	Reimb. for Shoes/Glasses	Shoe/Glass
344	Reimb. for Bus Pass	BUS-PASS
345	Reimb. for CDL License Fee	CDL Fee-RE
350	Hookina Imputed Inc-Noncash	Hookina-NC
351	Group Term Life Ins	GTL Ins
352	Employer Paid Park Tax	PARK-Tax
353	Company Car Usage	CO-CAR
354	Restricted Stock Dividend	Res StockDiv
355	Rec Fac Usage	Rec Fac Use
356	Exec. Country Club Dues	CTRY-CLUB
357	Exec. Spouse Travel	SPSETRVL
358	Stock Option	STK-OPT
359	Inc on Exe Fuel Purch	Exec Fuel
360	Employer Pd Housing-Foreign	Housing
361	Employer Pd-Foreign IncomeTax	Foreign Inc. Tax
362	Home Leave-Foreign	Home Leave
363	Hypo Tax (Deduction)	Hypo Tax
365	Foreign Service Premium	Foreign Svc Prem
366	Section 409A Income	409A Income
399	Default-Retro Pay	Def retro py
401	Flex Credit	FLXCREDIT
411	Flex Hlthcare Reimb. (EVN)	HLTHCARE-EV
412	Flex Depcare Reimb. (EVN)	DEPCARE-EV
421	Flex Hlthcare Reimb. (ODD)	HLTHCARE-OD
422	Flex Depcare Reimb..(ODD)	DEPCARE-od

CA-IR-362

Ref: HELCO-WP-918 & Response to CA-IR-116 (Standard Labor Rates).

Pages 2-7 of the response to CA-IR-116 contain actual 2004 hours and payroll dollars, by labor class, supporting HELCO-WP-918. Using the BUOC labor class for illustration purposes, please explain and describe the nature and purpose of each of the following pay types:

- a. Penalty (Tran_Code 021 & 023).
- b. C/O Meal Time Penalty (Tran_Code 024 & 025).
- c. Meals (Tran_Code 121).
- d. Shift (Tran_Code 202 - 206).
- e. Shift OT (Tran_Code 212 - 216).
- f. Shift DT (Tran_Code 222 - 226).
- g. Shift .5X (Tran_Code 232 - 236).

HELCO's Response:

- a. **Earning Code 021 - Penalty @ .5 x:** This code is used to pay an employee:
 - the penalty for overtime worked between midnight and 0600 when using overtime work codes that pay time and one-half instead of double time. The units should be recorded for only the hours that the work code will NOT automatically pay at the double time rate. After 4 hours (C1) or 2 hours (TX) the work code will automatically pay the double time rate.
 - the penalty for late lunch.
 - the penalty for late or lack of notice of either scheduled overtime or change of work schedule (when overtime period paid at time-and-a-half).

Earning Code 023 - Penalty @ 1 x: This code is used to pay an employee:

- the penalty for late or lack of notice of either scheduled overtime or change of work schedule (when overtime period paid at double-time).
- an additional 1x the rate during the normal roster work hours when the employee works 4 hours (5/8) or 5 hours (4/10) or more on a callout into a normal roster work day.

- b. **Earning Code 024 - Meal Time Penalty @ 1.5 x:** This code is used to pay an employee the allowance for the time to eat meals earned during overtime periods (when overtime period being paid at time-and-a-half). This code may only be used when the employee is taking the meal at the end of the shift and has gone home for the day. If the meal time is taken between recorded start and stop hours, do not add this code. The meal time penalty will be paid as productive time worked through the start and stop times and recorded work codes. Unit is recorded in hours/minutes. Each unit is paid at the rate of 1.5 x the employee's applicable rate.

Earning Code 025 - Meal Time Penalty @ 2 x: Same as above except each unit is paid at the rate of 2.0 x the employee's applicable rate (when overtime period being paid at double-time).

- c. **Earning Code 121 - Meal Allowance:** This code is used to pay an employee the meal allowance. For example, when an employee is required to work one and one-half hour beyond the normal quitting time, the employee will be entitled to a meal. Unit is recorded in increments of one. Each unit is paid at the current bargaining unit contract provision. I.e., if an employee is entitled to 3 meals, 3 units are recorded.

- d.-f. **Earnings Code 202 – 206, 212 – 216, 222 – 226 and 232 – 236:** These codes are used to pay an employee a shift pay differential, depending on what shift is worked on (see HELCO's response to CA-IR-362, page 4 for listing of shift codes) and in accordance with the bargaining unit contract between the Company and the Union.

CA-IR-363

Ref: HELCO-WP-918 & Response to CA-IR-116 (Standard Labor Rates).

Pages 2-7 of the response to CA-IR-116 contain actual 2004 hours and payroll dollars, by labor class, supporting HELCO-WP-918. Using the BUOC labor class for illustration purposes, the total pay (\$1,913,238) and hours (99,305) includes regular earnings, overtime pay, penalty, shift, etc., including the Tran_Codes referenced in the immediately preceding informational request.

Please provide the following:

- a. Why does the "OT adj \$" column include Penalty (Tran_Code 021 & 023), C/O Meal Time Pen (Tran_Code 024 & 025), and Meals (Tran_Code 121), but the related hours were excluded from both the "OT adj hrs" and the "prod hrs" columns? Please explain.
- b. Why are the Shift (Tran_Code 202 - 206) hours excluded from the "prod hrs" column? Please explain.
- c. Why does the "OT adj \$" column include Shift OT (Tran_Code 212 - 216), but the related hours are excluded from both the "OT adj hrs" and the "prod hrs" columns? Please explain.
- d. Why does the "OT adj \$" column include Shift DT (Tran_Code 222 - 226), but the related hours are excluded from both the "OT adj hrs" and the "prod hrs" columns? Please explain.
- e. Why does the "OT adj \$" column include Shift .5X (Tran_Code 232 - 236), but the related hours are excluded from both the "OT adj hrs" and the "prod hrs" columns? Please explain.

HELCO's Response:

- a. The dollars attributable to earnings codes 021, 023, 024, 025 and 121 are earnings actually paid to an employee above the dollars attributable to earnings codes 001 - 018 and are considered "differential" type remuneration related to the hours worked attributable to earnings codes 001 - 018. As an example, if an employee is allowed to take his or her lunch late, that employee is paid at 0.5 of his or her regular pay for the hours work as a penalty pay using earnings code 021. This remuneration is in addition to the regular pay for the hours worked, which hours are already included in earning codes 001 - 018. If this employee worked from 7:00 a.m. to 3:30 p.m. and was allowed to take his or her lunch at 3:00 p.m., that employee would get paid for eight hours at his or her regular rate of pay plus an additional 0.5 of his or her regular rate of pay. In this example, for standard labor rate calculation purposes, since the eight hours of productive

labor has already been accounted for as related to the dollars related to the regular pay, it would not be correct to include the same eight hours relating to the penalty pay. This employee worked a total of eight hours, getting paid for eight hours at his or her regular rate of pay plus eight hours at the penalty rate of pay.

b. See response to items c. – e. below.

c. – e.

The dollars attributable to earnings codes 202 – 206, 212 - 216, 222 - 226, and 232 - 236 are earnings actually paid to an employee above the dollars attributable to earnings codes 001 – 018 and are considered “differential” type remuneration related to the hours worked attributable to earnings codes 001 – 018. As an example, if an employee works on a Sunday day shift, that employee is paid at \$1.14 per hour worked as a shift differential using earnings code 204. This remuneration is in addition to the regular pay for the hours worked, which hours are already included in earning codes 001 – 018. If this employee worked from 7:00 a.m. to 3:30 p.m., that employee would get paid for eight hours at his or her regular rate of pay plus an additional \$1.14 per hour worked. In this example, for standard labor rate calculation purposes, since the eight hours of productive labor has already been accounted for as related to the dollars related to the regular pay, it would not be correct to include the same eight hours relating to the shift pay. This employee worked a total of eight hours, getting paid for eight hours at his or her regular rate of pay plus eight hours at shift rate of pay.

CA-IR-364

Ref: HELCO T-11 & HELCO T-5 Response to CA-IR-2 (Administration Department).

Page 4 of Attachment 1 to the response of HELCO T-5 to CA-IR-2 identified \$38,504 of non-project direct non-labor costs for RA HNO charged to production operations as being sponsored by HELCO T-11. However, support for this amount could not be readily determined from a review of the testimony, exhibits and workpapers sponsored by HELCO T-14. Please provide the following:

- a. Please identify and describe the components of the \$38,504 of non-project direct non-labor costs for RA HNO.
- b. Please provide a pinpoint reference to the portions of the testimony, exhibits and workpapers sponsored by HELCO T-11 that support the \$38,504.
- c. Please provide a copy of any documents or workpapers supporting the quantification of this amount.

HELCO Response:

- a. There are three components of the \$38,504 of non-project direct non-labor costs for RA HNO in Production Operations. They are \$18,800 for incentives and recognition (Ho'omaika'i, Ho'okina, and Safety Recognition programs) charged to RA HNA 723 (Manage & Administer Incentive & Recognition Programs); \$9,852 for the annual rent payable to the State of Hawaii for the Puueo Hydro Plant charged to RA HNL 926 (Manage Owned, Leased & Jointly Owned Property); and \$9,852 for the annual rent payable to the State of Hawaii for the Waiau Hydro Plant charged to RA HNL 926 (Manage Owned, Leased & Jointly Owned Property).
- b. There is no reference in HELCO T-11 that supports the \$38,504 for non-project direct non-labor 2006 TY forecast. This amount is forecasted in the Production Operations Block of Account and is therefore included in HELCO T-5 (see CA-IR-2, Docket No. 05-0315, HELCO T-5, Attachment 1, Page 2 and 4 of 5). HELCO T-11 is responsible for staffing count and safety.
- c. Annually, HELCO pays \$19,692 in rent for the use of the Wailuku River for the Puueo and

Waiau Hydro Plants. A copy of an invoice paid for March 2005, which was used as the baseline document to determine the 2006 Test Year forecast, is attached, as well as the current invoice for September 2006, which shows the invoice in its entirety (see Attachment 1, Pages 1 and 2). Monthly, we pay \$1,641; this amount is allocated at a rate of 50% between the Puueo and Waiau Hydro Plants, which is \$9,846 annually for each plant. Please refer to CA-IR-274 and CA-IR-275 (HELCO T-10) for information on the incentives and recognition program.

PLEASE DETACH AND RETURN ABOVE PORTION WITH YOUR PAYMENT FOR PROPER CREDIT

REFERENCE		APPTO	BILLING PERIOD	DESCRIPTION	AMOUNT
DATE	NUMBER				
03/01/2005	C-78794	Balance Due	03/01/2005 - 03/31/2005	USE OF GOVT WATER (03/2005)	1,641.00

Please Make Check Payable To: "Land & Natural Resources"

PAST DUE AMOUNTS MAY BE SUBJECT TO A 1% PER MONTH FINANCE CHARGE AND A LATE FEE
THE STATUS OF YOUR ACCOUNT IS AS FOLLOWS:

CURRENT	PAST DUE	FINANCE CHARGE	LATE FEE	TOTAL DUE
1,641.00	0.00	0.00	0.00	\$ 1,641.00

DOCUMENT
NUMBER

rp3663

DEPARTMENT OF LAND AND NATURAL RESOURCES



FISCAL OFFICE
P.O. BOX 621
HONOLULU, HAWAII 96809-0621
(808) 587-0353
08/10/08

DOCUMENT NUMBER
rp3663

COST CENTER: 0534
HAWAII ELECTRIC LIGHT CO.
ATTN: LAND SECTION
P.O. BOX 1027
HILO, HI 96721

SOURCE: 1723

TOTAL DUE: \$1,641.00

PLEASE DISREGARD THIS BILL IF PAYMENT HAS
BEEN MADE

AMOUNT PAID: _____

PLEASE DETACH AND RETURN ABOVE PORTION WITH YOUR PAYMENT FOR PROPER CREDIT

REFERENCE		APPTO	BILLING PERIOD	DESCRIPTION	AMOUNT
DATE	NUMBER				
09/01/2006	C-105442	Balance Due	09/01/2006 - 09/30/2006	USE OF GOVT WATER (09/2006)	1,641.00

Please Make Check Payable To: "Land & Natural Resources"
PAST DUE AMOUNTS MAY BE SUBJECT TO A 1% PER MONTH FINANCE CHARGE AND A LATE FEE
THE STATUS OF YOUR ACCOUNT IS AS FOLLOWS:

CURRENT	PAST DUE	FINANCE CHARGE	LATE FEE	TOTAL DUE
1,641.00	0.00	0.00	0.00	\$ 1,641.00

DOCUMENT
NUMBER

rp3663

CA-IR-365

Ref: HELCO T-11 & HELCO T-5 Response to CA-IR-2 (Administration Department).

CA-IR-2 specifically requested additional forecast documentation for non-labor expense. Based on a review of the responses to CA-IR-2, it does not appear that HELCO T-11 provided any additional information supportive of the non-labor expense forecast for the Administration Department. Please provide the following:

- a. Does the 2006 test year forecast include any non-labor expense prepared or sponsored by the Administration Department? Please explain.
- b. Did HELCO T-11 compile and provide information responsive to CA-IR-2?
 1. If so, please provide a copy to the Consumer Advocate and Utilitech.
 2. If not, does HELCO T-11 not sponsor any Administration Department non-labor expenses for inclusion in the 2006 test year forecast? Please explain.

HELCO Response:

HELCO T-11 is participating as a witness concerning employee count and safety. The witness for HELCO T-11, manages the Administration Department, of which most of its expenses are included in the A&G Block of Accounts. The A&G information is covered by HELCO T-9, witness Paul Fujioka.

- a. Yes, the 2006 test year forecast includes non-labor expenses prepared and sponsored by the Administration Department. The details of the Administration Department's non-labor expenses for the 2006 Test Year were included in the answer to CA-IR-2, under witness T-9.
- b. No, HELCO T-11 did not compile and provide information responsive to CA-IR-2. As explained above, the Administration Department's expenses are primarily from the A&G Block of Accounts, which is explained in detail by HELCO T-9. Information to complete CA-IR-2 for the Administration Department was supplied to HELCO T-9 for which Paul Fujioka used in compiling HELCO's response for the A&G Block of Accounts.

1. Please reference HELCO's response to CA-IR-2, Docket No. 05-0315, HELCO T-9, Attachments I (7 pages), J (8 pages), and L (6 pages) for the information requested in this IR.
2. N/A.

CA-IR-366

Ref: HELCO Response to CA-IR-154 (Contact Services).

CA-IR-154(d) sought the amount of contract services charged to O&M expense in 2005 (actual) and the amount included in HELCO's 2006 test year forecast, by Department. Except for the Production and Distribution Departments, the response to CA-IR-154 provided the requested information. For Production and Distribution, the response referred to various other source documents, including numerous testimony pages for HELCO T-6, HECO-612 and the response to CA-IR-97 (Distribution only). Please provide the following:

- a. With regard to the Production department and HELCO-544, please confirm that the 2005 actual contract services charged to O&M expense was \$5,745,000 and that the comparable amount included in the test year forecast is \$5,208,000. If this cannot be confirmed, please explain.
- b. With regard to the Distribution department, HELCO-612 identifies the amount of contract vegetation services charged to expense in 2005 of \$1,540,180 as compared to \$1,468,152 in the test year forecast. In contrast, page 3 of the response to CA-IR-97 appears to indicate that only \$143,985 of non-billable contract services were charged to O&M expense in 2005. Please provide the following:
 1. Please explain and reconcile these amounts.
 2. Please confirm that neither of these data sources reflect all contractor services incurred by the Distribution department and charged to O&M expense. If this cannot be confirmed, please explain.
- c. Please confirm that none of the referenced testimony pages or discovery responses summarize or recap the total amount of Distribution contract services charged to O&M expense in 2005 (actual) and included in HELCO 2006 test year forecast.
 1. If confirmed, please provide the amount included in O&M expense in 2005 (actual) and the amount included in HELCO's 2006 test year forecast, as originally requested.
 2. If this cannot be confirmed, please provide the requested amounts along with a pinpoint reference to the specific documents containing such information.

HELCO Response:

- a. With regard to the Production department and HELCO-544, please refer to Attachment 1 of CA-IR-77 for a revised exhibit (HELCO-544) confirming that the 2005 actual contract services charged to O&M expense was \$3,813,000 and that the comparable amount included in the test year forecast is \$5,207,000.
- b.

1. Neither HELCO-612 nor HELCO-619 reflects all contractor services incurred by the Distribution department in 2005. HELCO-619 was developed to illustrate the combination of HELCO labor costs and contractor expenses required to perform line construction and maintenance, and substation construction and maintenance work during the years 2000 to March of 2006. HELCO-619 never intended to include all Distribution department labor or all of the contractor services used by the Distribution department. HELCO-612 was developed to illustrate the expenditures for contract services related to vegetation management for years 2000 to 2005 and the 2006 test year forecast.

The response to CA-IR-97 segregated the information that was contained in HELCO-619 between O&M and capital related projects. As explained above, the contract services listed in HELCO-619 was for line construction and maintenance work and substation construction and maintenance work only. The amount of \$143,985 shown on page 3 of the response to CA-IR-97 was the amount of contractor services for line maintenance and substation maintenance in 2005 that was charged to expense. The amount of \$143,985 does not represent the total amount of contractor services used by the Distribution department that was charged to expense in 2005. The amount of \$1,540,180 shown in HELCO-612 was the total amount of contractor services for vegetation management that was charged to expense.

2. Neither HELCO-612 nor CA-IR-97 reflect the total amount of all contractor services incurred by the Distribution department in 2005. The total amount of contractor services in 2005 for the Distribution department is \$12,929,371. Of this amount, \$3,113,396 was O&M expense (\$23,753 for A&G Maintenance, \$10,152 for A&G

Operation, \$83 for Customer Accounts, \$414,493 for Distribution Operations, \$1,930,832 for Distribution Maintenance, \$17,594 for Production Maintenance, \$575,116 for Transmission Maintenance, and \$141,373 for Transmission Operation).

- c. None of the referenced testimony pages or discovery responses in part d of response to CA-IR-154 summarize or recap the total amount of Distribution contract services charged to O&M expense in 2005 and the amount included in HELCO's test year forecast.
 1. Response to CA-IR-264 part a. provided all Distribution department contract services in 2005. Please refer to page 3 of HELCO's response to CA-IR-264 for a summary of these expenses in 2005. This report is available for inspection at the HELCO's Regulatory Affairs Division Office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the requested information. Response to CA-IR-264 included a summary page with sub-totals for the 2005 contract service costs (please reference subpart b.2. above in HELCO's response to CA-IR-366 for information on the total contract services charged to O&M expense for 2005). For the 2006 test year contract services, this information was provided in HELCO-WP-101(g) which is Rate Case Report N2, Rate Case Direct Non-labor Report. The total 2006 test year forecast for contract services charged to O&M expense is \$2,718,541 (A&G Maintenance - \$11,880, A&G Operation - \$28,975, Customer Accounts - \$130, Distribution Maintenance - \$1,651,132, Distribution Operation - \$301,513, Production Maintenance - \$2,700, Production Operation - 0, Transmission Maintenance - \$542,802, Transmission Operation - \$179,409).
 2. Please refer to HELCO's response to CA-IR-264 for the total amount of actual

Distribution expenses charged to O&M for contract services in 2005. HELCO WP-101(G) shows the 2006 Test Year forecast for these same expenses.

CA-IR-367

Ref: HELCO T-14, p. 7, & HELCO-WP-1401 (Keahole Plant Additions).

Lines 14-15 of HELCO T-14 indicate that there are completed construction projects included in the 2006 test year forecast related to the Keahole power plant, which are discussed by HELCO T-15. Please provide the following:

- a. Referring to HELCO-WP-1401, please provide a descriptive listing of each project related to the Keahole power plant which the Company's original filing expected to be closed to plant in service during the 2006 forecast test year.
- b. Referring to the projects identified in response to part (a) above, please identify any updates or revisions to the project completion date or completed cost estimate.
- c. Referring to the projects identified in response to part (a) above, please provide a pinpoint reference to that portion of the testimony, exhibits or workpapers of HELCO T-15 that discusses the purpose, or sponsors the estimated cost of each Keahole project. If none, please so state.

HELCO Response:

- a. The following descriptions are provided:

H0001373 Keahole SS Base Mobile

This project was cancelled and later resurrected as H0001454. Refer to CA-

IR-371 c.1. Project involves the installation of a mobile radio base station at the site. This will allow the Keahole power plant control operator to hear the communications between the dispatchers and the field personnel. This project is planned to be completed in October 2006.

H0000655 Keahole Land Rezoning

Project involved the reclassification of the Keahole property from Conservations district to Urban district and changing the County zoning from Open designation to the General Industrial designation. Project included preparation of EIS studies, preparation and approval; submittal of testimony for a number of employees and expert witnesses;

preparation of the witnesses; several days of hearings before the LUC; and drafting, review and finalization of the lengthy decision and order. This project has been completed as the land is now zoned industrial on May 2, 2006.

H0001386 Keahole CT Sound Enclosure

Project involved the erection of sound mitigating enclosures to reduced emitted sound pressure levels from CT-4 and CT-5 and their auxiliary equipment skids to a level of 45 decibels at night and 55 decibels during the day as measured at the facility property line. There are still outstanding items with the CT-5 sound levels at the north property line that do not meet to required specifications of permitted sound levels. These are being resolved with the suppliers, Sound Technologies, Inc. (STI), and United Steel Structures, Inc. (USSI). Although initially stated to be completed by November 2006 in CA-IR-181 Attachment 1, it is anticipated that the ongoing additional remediation efforts will be completed in 1Q2007.

H0001388 Keahole Water Treatment HMI Replacement (O&M)

This project is to provide an upgrade Human Machine Interface (HMI) for the existing obsolete computerized interface that currently exists. This project was transferred from Plant Adds to O&M and is expected to be completed in 4Q2006.

H0001394 Kea CT-2 Governor Controls

This project will provide a state of the art turbine and generator control system for CT-2. The existing control system is obsolete, prone to failures, very difficult to troubleshoot and uses an arcane machine language programming protocol. The unit governor and voltage regulators are proprietary ABB devices with support provided from Sweden. The new control system is based on the same hardware, software, and interface that the CT-3, CT-4, and CT-5 control upgrades are based on. This provides a common interface for both

Operations and Maintenance personnel. Extensive rework is also being done to standardize the field devices such as pressure switches, pressure transmitters, flow meters and the like, as it currently exists of a mix of devices from myriad suppliers. This is expected to be completed in 4Q2006.

H3126000 Keahole CT4 Combustion Turbine

Additional costs associated with closing and completion of all remaining consulting and construction contracts for construction of CT-4. Revised Plant Addition Cost is estimated to be -\$22,500 because of a credit of \$65,000 against the project to settle HELCO's warranty claims against the consultant. This project will be completed in conjunction with H0001386 above.

H3164000 Keahole CT5 Combustion Turbine

Additional costs associated with closing and completion of all remaining consulting and construction contracts for construction of CT-5. Revised Plant Addition Cost is estimated to be -\$22,500 because of a credit of \$65,000 against the project to settle HELCO's warranty claims against the consultant. This project will be completed in conjunction with H0001386 above.

DHEINZ02 Keahole CT-2/4/5 Safety Barriers

This project is to add permanent access systems and work platforms to the roof elements of the combustion turbine skids to allow safe access for maintaining roof mounted fans, sensors, dampers, other devices mounted on top of the units. With the installation of the sound enclosures, this access became more difficult as the areas for ladder erection became restricted and precludes easy access. Although initially stated to be completed by November 2006 in CA-IR-181 Attachment 1, it is anticipated that this project will now be completed in

2007.

DHEINZ03 Keahole Acoustic System

This project was cancelled.

DHEINZ04 Keahole CT2 Black Start

This project is to provide a control interface for the CT-2 black start diesel generator to allow the diesel generator to provide power to the CT-4 or CT-5 switchgear to enable a startup of the combustion turbine on the diesel in the event of an Island wide blackout. This feature would allow operational flexibility in a blackout event if CT-2 were not able to operate. A successful proof of concept manual test of this was performed in early 2005 to verify that the diesel generator was capable of providing sufficient electrical power to enable a startup of CT-4. Although initially stated to be completed by October 2006 in CA-IR-181 Attachment 1, it is anticipated this project will be completed 2007.

DHEINZ06 Keahole Fire Alarm Connection

This project is to integrate the discrete and remote fire suppression systems that were installed as a result of the sound mitigation projects at Keahole for CT-4, CT-5, and CT-2. The fuel pump skid enclosures for the three units and the fuel oil centrifuge building were equipped with water mist fire suppression systems since these enclosures are normally unmanned and plant personnel would not immediately be aware of a fire in one of these unattended enclosures. Thus the remote systems were integrated into the main plant wide fire alarming system to alert operating personnel of activation and healthy status of the fire protection systems. This project is complete but for outstanding remote interface connections to the SCADA system, which is expected in 4Q2006.

DHEINZ07 Keahole CT4/5 CO2 System Upgrade

This project provided an additional CO2 bottles for the long duration release CO2 system retrofit for CT4 and CT5. This project was cancelled due to HELCO's reuse of existing CO2 bottles formerly utilized for the CT-3 control room, but converted to a water deluge system due to concerns of personnel asphyxiation in the event of a CO2 dump into the habitable space.

- b. Refer to response provided for CA-IR-181, Attachment 1.
- c. Lines 2 through 9 on Page 4 of HELCO T-15 provide background for H3126000 Keahole CT4 Combustion Turbine and H3164000-Keahole CT5 Combustion Turbine. All other Keahole projects identified in subpart a are not covered by HELCO T-15.

CA-IR-368

Ref: HELCO T-14 & HELCO T-5 Response to CA-IR-2 (Engineering Department).

Page 4 of Attachment 1 to the response of HELCO T-5 to CA-IR-2 identified \$117,800 of non-project direct non-labor costs for RA HW0 charged to production maintenance as being sponsored by HELCO T-14. However, support for this amount could not be readily determined from a review of the testimony, exhibits and workpapers sponsored by HELCO T-14. Please provide the following:

- a. Please identify and describe the components of the \$117,800 of non-project direct non-labor costs for RA HW0.
- b. Please provide a pinpoint reference to the portions of the testimony, exhibits and workpapers sponsored by HELCO T-14 that support the \$117,800.
- c. Please provide a copy of any documents or workpapers supporting the quantification of this amount.

HELCO Response:

- a. Please refer to response provided earlier for CA-IR-2, HELCO T-14, Attachment A, page 1 of 1 which HELCO submitted on June 16, 2006.

ICB-PYA-Misc Engr Services – G. Yonamine and ICB-PYA-Plng O&M Engr-T.

Koyamatsu/B Morikuni are Intercompany Billings (ICBs) for work done by the HECO Power Supply Engineering Department Administrative Division (represented by the Responsible Area code of PYA). Intercompany Service Forms are typically submitted by HECO to HELCO in order to forecast for these charges. Historically, PYA has been involved in generating these forms for other HECO departments (ie. PYB, PYM, etc.) and therefore, forecasted cost has been inadvertently linked to PYA. The \$38,300 and \$25,100 were added to the list in error.

ICB-PYB-Misc Engr Services – G. Yonamine represents Intercompany Billings for work done by the HECO Power Supply Engineering Department Generation Planning Division (represented by the Responsible Area code of PYB). In past years, Intercompany Service Forms were generated as well as purchase orders to pay for the annual charges. See

Attachment 1 of this response for Intercompany Service Forms for 2003 through 2005 to support historical use of this department. See Attachment 2 of this response for a listing of purchase orders issued from 2001 through 2004 to support the historical use of this department. PO# H24298, issued 1/20/2004 also included cost from 2005. Therefore, there have been annual costs since 2001 from HECO Power Supply Engineering Department Generation Planning Division (PYB). Although an Intercompany Service Form was not received for 2006 to document the \$15,900, there had been historical data to support forecasting the \$15,900 for 2006. Currently, PO# H36032, issued 2/21/2006 has already been invoiced \$29,510.86 for ICBs for PYB, nearly double the forecasted amount of \$15,900.

ICB-PYM-HELCO Misc Eng/GAM-Mike Yuen represents Intercompany Billings for work done by the HECO Power Supply Engineering Department Mechanical Engineering Section (represented by the Responsible Area code of PYM). Intercompany Service Form to support the \$38,500 budgeted for 2006 is included as Attachment 3 of this response.

- b. Please refer to response provided earlier for CA-IR-2, HELCO T-14, Attachment A, page 1 of 1 which HELCO submitted on June 16, 2006.
- c. Refer to part a.

INTERCOMPANY SERVICE FORM

CA-IR-368
DOCKET NO. 05-0315
ATTACHMENT 1
PAGE 1 OF 2

(Check one)

☒ Recurring

☐ Non-Recurring

Date of Request: HECO prepared

Date the Estimate is Needed: 4/11/03

Receiver Information:

Contact Person's Name: Clyde Nagata

Contact Person's Phone Number: (808) 969-0321

Subsidiary (or Other HEI Affiliate) Company Name: HELCO

Contact Person's RA: HWA

Approved By:

Provider Information:

Contact Person's Name: Ross Sakuda / Bert Morikuni

Contact Person's Phone Number: ((808) 543-4450 / (808) 543-7549

Company Name: HECO

Contact Person's RA: PYB / PYA

Approved By:

R. Brennan Munger

RBW 4/11/03

SCOPE OF SERVICE OR WORK (See Instructions):

HECO will provide Generation Planning Services for HELCO.

MAJOR PROCESS THAT THIS SERVICE SUPPORTS:

Plan for Demand & Energy Needs.

ESTIMATES (To Be Provided By PROVIDER)(See Instructions - Please attach details):

	<u>TOTAL</u> <u>YEAR 2004</u>	<u>TOTAL</u> <u>YEAR 2005</u>
Labor	\$62,600	\$63,500
Overheads	\$33,500	\$32,900
Non-Labor	\$4,400	\$4,400
Total Costs	\$100,500	\$100,800
Labor Hours	1,760 Hours	1,720 Hours

INTERCOMPANY SERVICE FORM

CA-IR-368
DOCKET NO. 05-0315
ATTACHMENT 1
PAGE 2 OF 2

(Check one)

☒ Recurring

☐ Non-Recurring

Date of Request: HECO prepared

Date the Estimate is Needed: 3/15/02

Receiver Information:

Contact Person's Name: Clyde Nagata
Contact Person's Phone Number: (808) 969-0321
Subsidiary (or Other HEI Affiliate) Company Name: HELCO
Contact Person's RA: HWA

Approved By:

Provider Information:

Contact Person's Name: Ross Sakuda / Bert Morikuni
Contact Person's Phone Number: ((808) 543-4450 / (808) 543-7549
Company Name: HECO
Contact Person's RA: PYB / PYA

Approved By: *R. Brenner Munger RBM*

SCOPE OF SERVICE OR WORK (See Instructions):

HECO will provide Generation Planning Services for HELCO.

MAJOR PROCESS THAT THIS SERVICE SUPPORTS:

Plan for Demand & Energy Needs.

ESTIMATES (To Be Provided By PROVIDER)(See Instructions - Please attach details):

	<u>TOTAL YEAR 2003</u>	<u>TOTAL YEAR 2004</u>
Labor	\$87,600	\$82,700
Overheads	\$27,900	\$25,600
Non-Labor	\$30,300	\$8,200
Total Costs	\$145,800	\$116,500
Labor Hours	2,660 Hours	2,420 Hours

Hawaii Electric Light Company, Inc.
PURCHASE ORDERS FOR ICB-PYB

Purchase Order No.	Date Issued	Description	Original Value	Amount Paid	Comments
H09923	1/25/2001	PYB Ross Sakuda Generation Planning Studies	\$102,465.00	\$110,884.32	
H14236	2/20/2002	PYB Ross Sakuda Generation Planning Studies	\$99,600.00	\$151,154.26	Replaced H09923
H19415	2/18/2003	PYB Ross Sakuda Generation Planning Studies	\$145,800.00	\$175,978.21	Replaced H14236
H24298*	1/20/2004	PYB Ross Sakuda Generation Planning Studies	\$100,500.00	\$97,392.88	Replaced H19415
H36032	2/21/2006	PYB Ross Sakuda Generation Planning Studies	\$38,500.00	\$29,510.86	Replaced H24298

* Includes cost for 2005

INTERCOMPANY SERVICE FORM

Check one:

- ☒ Recurring
☐ Non-Recurring

Period of Service Requested (check one):

- ☒ 2 years (non-project/non-program)
☐ 5 years (project/program)

Date of Request: 3/25/2005

1) Receiver Information:

Subsidiary (or Other HEI Affiliate) Company Name: HELCO
Department/Division: Engineering Department
Contact Person's Name: Clyde Nagata
Contact Person's Phone No & Mail Stop: 808-969-0321, Helco-WA
Contact Person's RA: HWA

Codeblock:	RA	Act	Loc	Ind	Proj	Subproj/work order (if any)
	HWA	211	RST	NE	HWAZZZZZ	

Request Approved by: Clyde Nagata, Manager, HELCO Engineering Department

SCOPE OF SERVICE OR WORK (See Instructions):

Miscellaneous engineering services for year 2006 to support HELCO Power Supply maintenance activities and other facility improvements. Includes HELCO GAM work.

MAJOR PROCESS THAT THIS SERVICE SUPPORTS:

Engineer, Design & Construct Generation Facilities

LINE ITEM: (to be used by Provider in Pillar)

Receiver RA	Request No.	Short Description
HWA		Intercompany Charges - Miscellaneous Engineering Support

2) Provider Information:

Company Name: Hawaiian Electric Company, Inc.
Department/Division: Power Supply Engineering / Power Plant Engineer
Contact Person's Name: Bert Morikuni / Mike Yuen
Contact Person's Phone No & Mail Stop: (808) 543-7549 WA3-YA / (808) 543-7998 WA3-YM
Contact Person's RA: PYA / PYM

Codeblock:	RA	Act	Loc	Ind	Proj	Subproj/work order (if any)
	PYM	211	RST	BE	NPYZZZZZ	

Approved By: Bert Y. Morikuni

ESTIMATES (To Be Provided By PROVIDER)(See Instructions - Please attach details):

	TOTAL YEAR 2006	TOTAL YEAR 2007
Labor	\$22,000	\$22,000
Overheads	\$15,700	\$15,700
Non-Labor	\$800	\$800
Total Costs	\$38,500	\$38,500

Labor Hours 640 640

3) Receiver Information (To be completed after estimates are received):

Date received: 3/30/05
Estimate Accepted and Approved by: [Signature]
HARU K. KAMIGAKI

CA-IR-369

Ref: HELCO T-14 & HELCO T-5 Response to CA-IR-2 (Engineering Department).

CA-IR-2 specifically requested additional forecast documentation for non-labor expense. Based on a review of the responses to CA-IR-2, it does not appear that HELCO T-14 provided any additional information supportive of the non-labor expense forecast for the Engineering Department. Please provide the following:

- a. Does the 2006 test year forecast include any non-labor expense prepared or sponsored by the Engineering Department? Please explain.
- b. Did HELCO T-14 compile and provide information responsive to CA-IR-2?
 1. If so, please provide a copy of such information to the Consumer Advocate and Utilitech.
 2. If not, does HELCO T-14 not sponsor any Engineering Department non-labor expenses for inclusion in the 2006 test year forecast? Please explain.

HELCO Response:

- a. Yes. There are non-labor expenses in the 2006 test year forecast for the Engineering department but the expenses are covered under various departments and sponsored under T-6 and T-9. See responses to CA-IR-2 Part B, HELCO T-6. See also the responses to CA-IR-2, HELCO T-9, Attachments A and N, and CA-IR-2, HELCO T-14, Attachment A, which HELCO submitted on June 16, 2006.
- b. Refer to subpart a.

CA-IR-370

Ref: HELCO-WP-1401 & Response to CA-IR-180 (Plant Additions).

The response to CA-IR-180 revises certain capital projects to recognize updated project status (i.e., completion dates, cancellations or construction cost). Please explain and define the following terms as used to describe the project status:

- a. On-going.
- b. On-schedule.
- c. Complete.
- d. Delayed.
- e. Cancelled.
- f. Closed to fund higher priority.
- g. Transferred to O&M.
- h. Transferred to another project.

HELCO Response:

- a. On-going: Usually blanket projects that consist of numerous small projects and these blanket projects are budgeted every year so it is considered on-going.
- b. On-schedule: Specific projects scheduled to be completed and plant added in 2006.
- c. Complete: Specific projects that have been completed and plant added in 2006.
- d. Delayed: Specific projects that have slipped to years beyond 2006 and will not be plant added in 2006.
- e. Cancelled: Specific project no longer required and taken out of the capital budget expenditures plan.
- f. Closed to fund higher priority: Determination made by the department that the funds for this project could be better used for higher priority projects.

- g. Transferred to O&M: Specific projects that were budgeted as capital in the 2006 capital expenditures budget but should have been in O&M expense. Project removed from the capital budget.
- h. Transferred to another project: Specific capital project that was a duplicate or its scope included in another specific project and therefore duplication eliminated from the capital budget.

CA-IR-371

Ref: HELCO-WP-1401 & Response to CA-IR-180 (Plant Additions).

The response to CA-IR-180 revises certain capital projects to recognize updated project status (i.e., completion dates, cancellations or construction cost). Please clarify the status of the following projects:

- a. H0000933 – Kukuihaele Regulators: The project status is listed as being “complete” with a plant addition date of 4/13/05.
 1. Was this project actually completed and placed in service in April 2005 or is the date in error? Please explain.
 2. If the project was completed in 2005, was the project closed to plant in service in 2005 and included in the beginning balance for rate base purposes? Please explain.
- b. H0000730 – Hawaiian Paradise Park Supy: The project status is listed as being “complete” with a plant addition date of 12/28/05.
 1. Was this project actually completed and placed in service in December 2005 or is the date in error? Please explain.
 2. If the project was completed in 2005, was the project closed to plant in service in 2005 and included in the beginning balance for rate base purposes? Please explain.
- c. H0001273 – Keahole SS Mobile Base: The project status is listed as being “closed to fund higher priority.”
 1. Were any costs incurred on the project prior to closing?
 2. If so, please explain HELCO’s accounting for said costs.

HELCO Response

- a.1. Yes. H0000933 – Kukuihaele Regulators, was placed in-service and plant added on

4/13/05.

a.2. Yes. At the end of 2005, the rate base included \$59,737.36 for this project with costs closing in April for \$36,411.77 and \$23,325.59 in November 2005. HELCO will later update the plant addition forecast for 2006 to remove the original plant addition forecast of \$84,730 for this project.

b.1. Yes. H0000730 – Hawaiian Paradise Park Supy, was placed in-service and plant added on 12/28/05 for \$40,548.65 and on 1/2006 for \$11,861.31.

b.2. Yes. At the end of 2005, the rate base included \$40,548.65 for this project. HELCO will later update the plant addition forecast for 2006 to reduce the amount from \$15,595 as the original plant addition forecast to \$11,861.31 as a revised plant addition forecast for 2006.

c.1. No. There were no costs incurred for project H0001373 – Keahole SS Mobile Base.

However, the project is now being done under H0001454 – Keahole SS Mobile Base, recently estimated at \$52,140 and will be placed in service October 2006. HELCO will later update the plant addition forecast for 2006 to reduce the amount from the \$61,194 as the original plant addition forecast to \$52,140 as a revised plant addition forecast for 2006.

c.2. NA.

CA-IR-372

Ref: HELCO-WP-1401 & Response to CA-IR-180 (Plant Additions).

The response to CA-IR-180 revises certain capital projects to recognize updated project status (i.e., completion dates, cancellations or construction cost). Several projects were identified as being "on-schedule" and HELCO-WP-1401 showed additions to the test year plant in service, but the revised completion dates now indicate that the projects will not be completed until after the 2006 forecast test year. Please clarify and explain whether each the following projects are expected to be completed subsequent to 2006 such that the amount recognized as a plant addition in HELCO's original forecast should be removed from the 2006 rate case forecast:

- a. DHEINZ01 – Hill 5 Sootblower. 11/07 completion. \$50,000 should be removed as a 2006 plant addition.
- b. H0000650 – Kukio 69KV UG Conversion. 12/10 completion. \$120,956 should be removed as a 2006 plant addition.
- c. (no project number) – Apollo 69KV line Drops. 3/07 completion. \$82,000 should be removed as a 2006 plant addition.
- d. H0001203 – Apollo Kamaoa Substation. 3/07 completion. \$124,970 should be removed as a 2006 plant addition.
- e. H0001204 – Apollo Kamaoa to PT MW. 2/07 completion. \$233,659 should be removed as a 2006 plant addition.
- f. H0001205 – Apollo SCADA at Kamaoa. 2/07 completion. \$62,484 should be removed as a 2006 plant addition.

HELCO Response:

- a. Yes. Remove from the original forecast of 2006 plant additions estimate.
- b. Not Applicable. The original forecast as shown on HELCO-WP-1401 page 3, reflects no plant addition for this project in 2006. \$152,815 was shown as CWIP at the end of 2005 and also at the end of 2006.

- c. Yes. Remove from the original forecast of 2006 plant additions estimate.
- d. Yes. Remove from the original forecast of 2006 plant additions estimate.
- e. Yes. Remove from the original forecast of 2006 plant additions estimate.
- f. Yes. Remove from the original forecast of 2006 plant additions estimate.

CA-IR-373

Ref: HELCO-WP-1401 & Response to CA-IR-180 (Plant Additions).

The response to CA-IR-180 revises certain capital projects to recognize updated project status (i.e., completion dates, cancellations or construction cost). The update described several projects as "transferred to O&M" while original HELCO-WP-1401 showed additions to test year plant in service for these same projects. Please provide the following:

a. Please clarify and explain whether the cost of each of the following projects were included

in O&M expense in the Company's original filing or whether HELCO is now proposing to revise its O&M forecast to include the cost of such projects in O&M expense:

1. H0000509 – CT2 Carbo Blast Modification.
2. H0001158 – CT-1 Low Smoke Fuel Nozzles.
3. H0001388 – Keahole Water Treatment HMI Replacement.
4. H0001387 – Hill 6 Hydrogen Dryer and Control Panel.
5. H0001392 – Hill 6 Blr VFD Upgrades

b. Please explain the basis for HELCO's determination that each of the following projects no longer qualifies as a capital project:

1. H0000509 – CT2 Carbo Blast Modification.
2. H0001158 – CT-1 Low Smoke Fuel Nozzles.
3. H0001388 – Keahole Water Treatment HMI Replacement.
4. H0001387 – Hill 6 Hydrogen Dryer and Control Panel.
5. H0001392 – Hill 6 Blr VFD Upgrades

c. Please explain the basis for HELCO's determination that each of the following projects no longer qualifies as a capital project:

1. H0000509 – CT2 Carbo Blast Modification.
2. H0001158 – CT-1 Low Smoke Fuel Nozzles.

3. H0001388 – Keahole Water Treatment HMI Replacement.
4. H0001387 – Hill 6 Hydrogen Dryer and Control Panel.
5. H0001392 – Hill 6 Blr VFD Upgrades

HELCO Response:

- a. The cost of each of the listed projects was not included in O&M expense in the Company's original filing. They were all (except for item 1 H0000509 – CT2 Carbo Blast Modification) recorded as reclassification adjustments from capital expenditures to O&M expenses. See HELCO T-5, page 54 and HELCO WP-510, page 2. Item 1 H0000509 – CT2 Carbo Blast Modification was removed as a project deemed not needed.
- b. Refer to HELCO CA-IR-342 for a similar response.
- c. Refer to response in subpart b.

CA-IR-374

Ref: HELCO-WP-1401 & Response to CA-IR-180 (Plant Additions).

The response to CA-IR-180 revises certain capital projects to recognize updated project status (i.e., completion dates, cancellations or construction cost). The change in cost estimate for several projects was identified on Attachment 2 as "higher customer demand." Please provide the following:

- a. Please explain and describe the reference to "higher customer demand."
- b. Referring to part (a) above, the context of the reference to "higher customer demand" is unclear. Please clarify whether this reference is relative to the Company's original 2006 forecast of test year customer growth or some other forecast measure of customer demand.

HELCO Response:

- a. The description of "higher customer demand" was used for blanket project "Purchase new kwh meters". We need more meters than the originally budgeted expenditure would provide for. By the end of 2006, we will have insufficient funds in the blanket due to the high level of construction activity and high level of requests for electrical connections experienced on the Big Island. We therefore, reforecasted expenditures in 2006 at a higher level than originally budgeted.
- b. See "a" of this response.

CA-IR-375

Ref: HELCO-WP-1401 & Response to CA-IR-180 (Plant Additions).

The response to CA-IR-180 revises certain capital projects to recognize updated project status (i.e., completion dates, cancellations or construction cost). The change in cost estimate for several projects was identified on Attachment 2 as "higher customer demand." Please provide the following:

- a. Please provide copies of additional documentation supporting the quantification (i.e., including customer counts or other quantities and unit cost rates) of the original and revised plant additions for each of the following projects:
 1. H1001000 – Purchase New KWH Meters. Original Addition: \$467,713. Revised Addition: \$614,826.
 2. H1002000 – Purch TSF and Related EQ. Original Addition: \$2,459,527. Revised Addition: \$4,787,280.
- b. Attachment 2 does not identify any changes in plant additions for other related plant categories, such as poles or services, to meet "higher customer demand." Does HELCO anticipate forecast increases to other projects in order to meet "higher customer demand?"
 1. If so, please identify the projected change in additions for each project and provide documentation supporting the quantification (i.e., including customer counts or other quantities and unit cost rates) of the original and revised plant additions for each identified project.
 2. If not, please explain the proposed increase in plant additions for meters and transformers without similar increases in poles or services.

HELCO Response:

- a.1. For H1001000, Purchase New KWH Meters the documentation used to create the 2006 budget is attached as pages 4-5. Page 4 provides the cost estimate that projected \$595,000 for 2006 KWH meter purchases. However, this amount was later reduced to \$468,000 in the final stages of developing the 2006 forecast. The forecasted expenditures were based upon an estimate of 1,967 new meter installations and 1,869 meter replacements in 2006. Page 5 provides the forecasted customer counts that were used to develop the estimate. As of June 2006 1,667 new meters or 85% of the total number of new meters forecasted for the entire year were already installed. The Purchase New KWH Meters project forecast was updated to accommodate this unanticipated increase in new meters during the first 6 months and the total amount of the project was increased by \$147,000 to \$615,000. The 2005 recorded for

H1001000 was \$564,854. The September 2006 recorded for H1001000 is \$524,345. The revised test year number to be adjusted in rate base is \$581,000 for 2006.

a.2. For H1002000, Purchase transformer and related equipment a 2006 estimate of \$2,948,000 was developed by trending 2004 and prior years expenditures for transformer purchases. Documentation of this estimated amount is provided in pages 6 to 9 of this response. In the final submittal for the 2006 budget the Purchase transformer and related equipment was reduced to \$2,459,527 (see Attachment 1 in response to CA-IR-182 for the approved Project Identification Form). In June of 2006 the need for transformer purchases was reviewed and the forecasted amount was revised to \$4,787,280 based on the 2005 recorded of \$4,589,651. The September 2006 actuals for the H1002000 blanket is \$3,507,010. The revised test year number to be adjusted in rate base is \$4,012,139 for 2006.

b.1. Since the response to CA-IR-180 was submitted, which was based upon July 2006 Pillar update, the following related plant categories have plant addition values that have increased by more than the \$100,000 criteria that was reportable for CA-IR-180.

- H1000000 – MINOR OH SERVICES
- H1003000 – MINOR UG SERVICES
- H1006000 – POLE LINE REPL & RELOC
- H1008000 – MINOR OH EXTN BELOW 20000
- H1017000 – MINOR UG EXTN BELOW 20000

See Attachment 1 of this response for the current forecast as of October 17, 2006 with comparison to HELCO-WP-1401. HELCO will revise its 2006 plant add forecast for these blankets at a later date.

HELCO used the actual cost for 2004 for each of the subject blanket projects for the proposed budget numbers. These numbers are submitted for management review and may be adjusted based on considerations for financial integrity, budget constraints and the need to fund higher priority projects. Priority is given to funding specific projects before funding the blanket projects. The updated FY06 Budget includes actual cost through September 2006 and a forecast for October through December. The forecasted values are based upon the average monthly expense from January through September with adjustments made to finance higher priority projects.

Meter Purchases
H1001000
Year: 2006

Customers	2005	2006	New Additions	Meter Cost includes auxiliary equipment per Unit	Total Additions	Meter Replacements	Total Meter Replacements	Total Meter Costs
R	59748	61373	1625	162.5	58,500.00	0	0	58,500.00
G	11987	12348	361	1462.5	36,100.00	1344	32,256.00	67,356.00
H	284	264	-20	36.1	36,100.00	0	0	36,100.00
P	61	61	0	180.00	58,482.00	523	94,140.00	152,622.00
F	127	128	1	4,000.00	-	0	4,000.00	4,000.00
Total	72207	74174	1867		188,162.00	1669	130,396.00	\$18,578.00

1% Failure R = 614 + 730 ANSI = 1344
1% Failure G = 123 + 400 ANSI = 523

Meter Rts - \$24
Meter Com - \$180
Com of switches - \$750
& Modern
CT meter - \$900
15kv CTs - \$800
PTs - \$500

MATERIALS \$ 319,578
LABOR \$ 1185 37,751
LABOR/OTHER 238,671
\$ 595,000

SALES (OWN) AND AVERAGE NUMBER OF CUSTOMERS
SUPPLY AND TOTALS

Sales								
	(R)	(R)	(P)	(P)	(P)	(P)	(P)	(P)
	2003	2004*	2005	2006	2007	2008*	2009	2010
R	389.2	407.6	423.5	438.5	449.7	462.8	475.3	487.6
G	401.2	430.6	434.2	454.1	472.1	490.0	506.4	523.6
g	90.6	93.3	95.6	98.3	101.1	103.8	106.4	109.0
J	310.7	327.2	338.7	355.8	371.0	386.2	400.4	414.6
R	21.3	20.4	18.7	17.2	16.0	15.0	14.3	13.7
h	9.3	8.6	7.9	7.1	6.8	6.1	5.7	5.3
k	12.1	11.6	10.8	10.1	9.2	8.9	8.6	8.4
P	229.8	227.7	240.8	237.6	239.0	240.2	240.8	243.0
F	4.2	4.3	4.3	4.4	4.4	4.5	4.6	4.6
% Incr.	5.1	3.3	3.7	3.6	3.7	2.7	2.4	2.5
Customers								
	(R)	(R)	(P)	(P)	(P)	(P)	(P)	(P)
	2003	2004*	2005	2006	2007	2008*	2009	2010
R	56,348	58,073	59,748	61,373	62,948	64,473	65,948	67,373
G/J	10,888	11,556	11,987	12,348	12,659	12,952	13,248	13,538
G	9,488	10,108	10,479	10,789	11,054	11,303	11,582	11,801
J	1,370	1,448	1,508	1,559	1,605	1,649	1,666	1,737
H/K	329	308	284	264	249	236	229	223
H	281	236	229	203	192	183	177	172
K	78	72	63	61	57	53	52	51
P	61	61	61	61	61	61	61	61
F	112	127	127	128	130	131	133	134
% Incr.	4.7	3.3	3.0	2.7	2.5	2.4	2.3	2.2

Section 3 - CS 1

PROJECT IDENTIFICATION FORM - INITIALIZE PROJECT

The Project identified below has not been established in MIMS

Project Title: Purchase TSF and Related Eq

Plant Addition Date: 2006-12

Project Number: H1002000
(Temporary)

Commitment Date: 2006-01

Primary Corporate Goal: SAIF

Strategic Plan Linkage: 1E - Reliability
(Primary)

Impact on Goal: High

Project Forecast (Thousand \$)							
(Attach the "View - 5-Yr Proj Costs by Ind & Cost Cat" report obtained from the estimators' Pillar file.)							
<u>Prior</u> <u>Years</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Future</u> <u>Years</u>	<u>Total</u>
\$0	\$2,948	\$2,958	\$2,964	\$2,971	\$2,971	\$0	\$14,810

Assessment Factors					
<u>Compliance</u>	<u>Competitive</u> <u>Advantage</u>	<u>Financial</u> <u>Impact</u>	<u>Reliability</u>	<u>Corporate</u> <u>Image</u>	<u>Total</u> <u>Score</u>
0	0	-60	27	0	-33

Purpose/Objectives:

To purchase and install new, replacement, and betterment transformers with related equipment.

Includes \$75K per year from 2006-2010 for ground rod replacement program.

Scope Description:

To purchase and install new, replacement, and betterment transformers with related equipment.

Includes \$75K per year from 2006-2010 for ground rod replacement program.

PROJECT IDENTIFICATION FORM - INITIALIZE PROJECT

The Project identified below has not been established in MMS

Resource Needs:

Justification:

To purchase and install new, replacement, and betterment transformers with related equipment.

Includes \$75K per year from 2006-2010 for ground rod replacement program.

Issues, Impacts, Considerations:

PROJECT IDENTIFICATION FORM - INITIALIZE PROJECT

The Project Identified below has not been established in MMS

Contributions:

Contributions in aid of construction (CIAC):

- In Kind

- In Cash

Cash Advance

Cost Sharing
(under HECO Policy UG Lines, October
2000)

Other type of payment (cash, non-cash) by outside party

PROJECT IDENTIFICATION FORM - INITIALIZE PROJECT

The Project Identified below has not been established in MIMS

PUC Approved: ☐ Approval Required ☒ Not Required

☐ Approved, Date of Decision & Order: - - Docket Number:

☐ Awaiting PUC Approval, Application Filed - -

Authorization for: ☐ Engineering ☐ Materials ☐ Construction

Approval Option: Initialize project

Submitted by: _____ Phone/Ext #: _____

Originator's Name: Debra Lal

Responsible Estimator: Julie Payne
(Pillar UserID)

Resp. Estimator Dept: Accounting
(Pillar Department Folder)

Project Manager: Danny Lal

Date: 04/18/2005

Required Approvals to Initialize a Project:

Responsible Manager Date

HELCO President Date

Required Approvals to Authorize a Project:

Responsible Manager Date

VP, Government and Community Affairs Date
(not required if PUC approval is obtained)

HELCO Accounting Manager Date

HELCO President Date

Hawaii Electric Light Company, Inc.
ASSOCIATED BLANKET PROJECTS AFFECTED BY HIGHER CUSTOMER DEMAND

Proj. No.	Project Description	HELCO-WP-1401				UPDATED ANALYSIS*		
		CWIP_123105	FY06 Budget	Plant Addition	CWIP_123106	Updated FY06 Budget	Updated Plant Addition	Updated CWIP_123106
H1000000	MINOR OH SERVICES	85	983,076	983,161	-	1,862,833	1,862,918	-
H1003000	MINOR UG SERVICES	-	1,172,702	1,172,702	-	1,484,138	1,484,138	-
H1006000	POLE LINE REPL & RELOC	1,471,438	2,115,925	2,190,853	1,396,511	2,842,561	2,437,909	1,876,090
H1008000	MINOR OH EXTN BELOW 20000	1,194,517	1,533,016	1,531,781	1,195,752	3,397,040	1,941,866	2,649,691
H1017000	MINOR UG EXTN BELOW 20000	1,420,044	1,128,471	1,702,162	846,353	1,249,432	1,732,402	937,074

* Source - Updated FY06 Budget includes actual cost through September from CAPXSep.xls and forecasted cost for the remainder of the year as of October 17, 2006.

CA-IR-376

Ref: HELCO-WP-1401 & Response to CA-IR-180 (Plant Additions).

The "notes" on page 2 of Attachment 2 identify three projects (H0011000, H3521000 & H0007000) stating: "These accounts are not included in the list above since their budgets are reduced as specific projects are created." According to HELCO-WP-1401, the Company's original forecast plant additions for each of these projects were \$1,907,232, \$703,277 and \$1,337,973, respectively. Please provide the following:

- a. Please confirm that the above quote simply recognizes that the additions forecast for these blanket projects will be reduced when and if new customer-specific projects are created. If this cannot be confirmed, please explain.
- b. Referring to Attachment 2, do any of the changes in plant additions for the listed projects represent transfers from the three blanket projects? Please explain.

HELCO Response:

- a. Yes. As new customer specific projects are created, the additions forecast for these blanket projects are reduced by the same dollar amount.
- b. No.

CA-IR-377

Ref: HELCO-WP-1401 & Response to CA-IR-180 (Plant Additions).

The response to CA-IR-180 revises certain capital projects to recognize updated project status (i.e., completion dates, cancellations or construction cost). Project H0000803, RPL PRI Kealoala Rd, has been advanced from completion in December 2007 to December 2006, with the following description: "The project was on-hold due to high demand for tree trimming. Tree trimming has now been completed and the project is scheduled to be completed in 2006." Please provide the following:

- a. Please identify the specific tree trimming that has been completed.
- b. When was this tree trimming completed?
- c. Was the tree trimming performed by HELCO employees or outside contractors? Please explain.
- d. With the completion of this tree trimming and the proposed increase to plant additions for the reference project, does HELCO propose to reduce the amount of tree trimming costs included in the 2006 O&M expense forecast? Please explain.

HELCO Response

- a. Completed the tree trimming to acquire 12 foot clearance from the new conductors and to facilitate construction.
- b. The tree trimming was completed on May 6, 2006.
- c. Tree trimming was performed by outside contractors. As described in page 60 of HELCO T-6, HELCO opts to utilize outside contracting for nearly all tree trimming activities.
- d. No. The trimming performed was to facilitate the installation of new facilities. Tree trimming was not scheduled in 2006 for the existing facilities in the area of this project. Therefore, the 2006 O&M expense for tree trimming is not expected to be reduced due to this project.

CA-IR-378

Ref: HELCO-WP-1401 & Response to CA-IR-180 (Plant Additions).

The response to CA-IR-180 revises certain capital projects to recognize updated project status (i.e., completion dates, cancellations or construction cost). Please provide the following:

- a. Does HELCO plan on revising the test year rate base forecast to include the revisions set forth on Attachment 2 in the determination of overall revenue requirement? Please explain.
- b. Attachment 2 is limited to those projects with plant addition changes exceeding \$100,000. Has the Company reviewed and revised the estimate of plant additions for all the remaining projects, i.e., those less than \$100,000? If so, please provide information for those projects, for which information is readily available, in a format similar to Attachment 2.

HELCO Response:

- a. Yes. After the test year is completed, in early 2007, HELCO will have actual plant additions and this information can be used in the determination of overall revenue requirements.
- b. No. We have not revised the estimate of plant additions for projects estimated at less than \$100,000. We plan to use actual plant additions after the test year is completed. Refer to response in part a.

CA-IR-379

Ref: HELCO-WP-1401 & Response to CA-IR-182 (Plant Additions).

In response to CA-IR-182, HELCO provided PIAs for 18 of the 21 projects set forth on HELCO-WP-1401 in excess of \$500,000. Pages 1-6 of Attachment 1 represent the PIA for Project H0000442, Palani Substation. Please provide the following:

- a. The "resource needs" section (Attachment 1, page 3) refers to the need for Engineering to bid out the construction work. Please provide the following:
 1. Was the \$1,330,000 project forecast based on a competitive bid? Please explain.
 2. Please provide a copy of the summary documentation provided by the successful bidder.
- b. The "strategic plan linkage" and the "primary corporate goal" (Attachment 1, page 1) indicate that the project will increase electric sales and generate new revenue. The "justification" section (Attachment 1, page 3) indicates that the substation is required to serve new loads in the Makalapua commercial development. Please provide the following:
 1. Has HELCO prepared any estimates or forecasts of the new annual revenues (dollars and kWh) expected to be realized from the development? If so, please provide such estimates for 2006 and 2007.
 2. Please provide the amount of revenues (dollars and kWh), if any, associated with the new development that have been included in the 2006 test year rate case forecast. If none, please explain.
- c. The "justification" section (Attachment 1, page 3) also indicates that HELCO will receive payment of 10% from the developer for engineering work. Please provide the following:
 1. Did HELCO actually collect the 10% from the developer? Please explain.
 2. Is the \$1,332,262 for the 2006 plant addition gross or net of the 10% to be paid by the developer?
 3. Please explain HELCO's accounting for the developer payment and how such amount was reflected in the test year forecast.
- d. The "contributions" section (Attachment 1, page 5) identifies a cash advance of \$1,259,562 (including GET) and indicates that the cash advance will be provided by the developer. Please provide the following:
 1. Please provide the amount of the cash advance HELCO collected from the developer. If none, please explain.
 2. How did HELCO account for this cash advance?
 3. Please explain whether and under what terms the cash advance is fully or partially refundable to the developer.
 4. Is the cash advance reflected in the test year forecast? If so, how?

HELCO Response:

- a.1 No. The \$1,330,000 was based on an estimate and not on a competitive bid. The outside construction will be submitted for competitive bid when HELCO obtains the necessary government approvals on the grading plan and State Health Department's National Pollutant Discharge Elimination System (NPDES) permit in October 2006.
- a.2 Not applicable.
- b.1 No. HELCO Engineering did not prepare an estimate of the annual revenues and kwhs for this project. The proposal is based on Rule 13, Section C of the tariff, requiring the developer to advance the entire estimated cost, therefore, HELCO did not calculate estimated kwhs and annual revenues. Also, the Company's test year sales forecast did not include discrete estimates for specific projects such as this project. Refer to T-2, page 2, line 1 and to HELCO-203, pages 1 through 7 which describes that HELCO's test year sales forecast is based upon an analysis of econometric and mathematical trending models.
- b.2 Refer to subpart b.1.
- c.1 Yes. HELCO collected the developer's share of the initial 10% payment of \$72,800 collectively for the whole project (the substation, 69KV drop, and 12KV underground getaway) in accordance with our January 18, 2000 proposal letter (Attachment 1) which was signed and payment received in June 2000. The amount of \$67,192 was attributed to the substation component, H0000442. HELCO also received the second down payment of \$125,956 in accordance with our May 23, 2006 proposal letter (Attachment 2) which was signed and payment received in July 2006. The amount of \$108,950 was attributed to the substation component, H0000442.

c.2 The \$1,332,262 estimate represented the cost of the substation project and is the gross amount which included the contributions from the developer.

c.3 The developer contribution was inadvertently not identified in the test year forecast of contributions.

d.1 The contributions section listed \$1,259,562 represents the total amount of contribution for the whole project (the substation, 69KV drop and 12KV underground getaway). However, since this IR refers only to the substation PIF, the listed \$1,259,562 is an error.

Subsequent to the initial proposal letter in 2000, costs have increased and a new proposal letter was sent in May 2006. The revised total estimate is now \$1,937,787. Attachment 1 is the January 18, 2000 proposal letter. Attachment 2 is the May 23, 2006 proposal letter for the next 10%. Attachment 3 summarizes the new estimated project costs, 65% charge to the developer, amount paid credited to the three components of the whole project and the breakdown of CIAC and Advance collected and remaining balance.

Summarizing, the new estimated project costs are:

			<u>Developer's 65% share</u>
H0000442	Palani Substation	\$1,676,162	\$1,089,505
H0000443	69KV Drop	\$139,890	\$90,929
H0000444	12KV getaway	\$121,735	\$79,128
Total Project cost		\$1,937,787	\$1,259,562

The cash advance amount paid by the developer so far is \$198,756.

d.2 \$190,846 was recorded as advance (MIMS GL Code 25200000 and \$7,910 was recorded as CIAC (MIMS GL Code 27100000).

d.3 Refer to Attachments 1 and 2, proposal letters which are based on Rule 13 of HELCO's tariff.

d.4 No. The \$72,800 was paid to HELCO in 2000 and the \$125,956 was paid in 2006 but inadvertently not listed in HELCO-WP-1409 (C).

The proposal letters referenced in this response as Attachments 1 and 2 are confidential and will be provided pursuant to Protective Order No. 22593, dated June 30, 2006.

Confidential Information Deleted
Pursuant to Protective Order No. 22593

CA-IR-379
DOCKET NO. 05-0315
ATTACHMENT 1
PAGE 1 OF 3

The requested information is confidential and will be provided pursuant to
Protective Order No. 22593, dated June 30, 2006.

Confidential Information Deleted
Pursuant to Protective Order No. 22593

CA-IR-379
DOCKET NO. 05-0315
ATTACHMENT 2
PAGE 1 OF 8

The requested information is confidential and will be provided pursuant to
Protective Order No. 22593, dated June 30, 2006.

Hawaii Electric Light Company, Inc.
DEVELOPER COST CONTRIBUTION FOR PALANI SUBSTATION

		Total Contribution	01/18/00 Letter	5/23/06 Proposal	Current Rec'd	Total	Total	Current	Current	Remaining	Remaining	Remaining
	5/23/06 Proposal	65% or 6.5MVA	Rec'd 6/28/00	Rec'd 7/21/06	From Developer	CIAC	Advance	CIAC	Advance	Balance	Balance	Balance
								Rec'd	Rec'd	Developer	CIAC	Advance
Substation H0000442	1,878,162	1,089,505	67,192	108,950	178,143	0	1,089,505	0	176,143	913,363	0	913,363
69KV Drop H0000443	139,890	90,929	5,608	9,096	14,703	0	90,929	0	14,703	76,225	0	76,225
12KV Getaway H0000444	121,735	79,128	0	7,910	7,910	79,128	0	7,910	0	71,218	71,218	0
TOTAL Project	1,937,787	1,259,562	72,800	125,956	198,756	79,128	1,180,434	7,910	190,846	1,060,808	71,218	989,588

CA-IR-379
DOCKET NO. 05-0315
ATTACHMENT 3
PAGE 1 OF 1

CA-IR-380

Ref: HELCO-WP-1401 & Response to CA-IR-182 (Plant Additions).

In response to CA-IR-182, HELCO provided PIAs for 18 of the 21 projects set forth on HELCO-WP-1401 in excess of \$500,000. Pages 7-12 of Attachment 1 represent the PIA for Project H0000449, Waikoloa Pump Sub. Please provide the following:

- a. The "scope description" section (Attachment 1, page 7) indicates that the project is to install a permanent substation to replace a temporary substation. Please provide the following:
 1. Upon completion of the permanent substation, please confirm that the cost of the temporary substation will be retired. If this cannot be confirmed, please explain.
 2. Please provide the original cost of the temporary substation.
 3. Does the 2006 test year rate case forecast reflect the retirement of the original cost of the temporary substation? If so, how? If not, why not?
- b. The "contributions" section (Attachment 1, page 11) identifies an "other type of payment (cash, non-cash) by outside party" in the amount of \$100,000 (including GET) with reference to a perpetual substation lot easement for HELCO. Please provide the following:
 1. Please explain the nature of the \$100,000 amount and the easement reference.
 2. Did HELCO receive or pay the \$100,000?
 3. Does the 2006 test year rate case forecast reflect the \$100,000? If so, how? If not, why not?

HELCO Response:

- a.1. Upon completion of the permanent substation, the temporary substation will be removed. The temporary substation was installed under Rule 12, Temporary Service and therefore, is not in rate base and no retirement from rate base is necessary.
- a.2. The actual cost of the temporary substation was \$58,539.53.

- a.3. No. The 2006 test year rate case forecast does not include the removal of the temporary substation as the cost of the temporary substation is not in the rate base.
- b.1. The comment of \$100,000 under "other type of payment" was in error.
- b.2. No. No payment or receipt of \$100,000 required.
- b.3. Not applicable.

CA-IR-381

Ref: HELCO-WP-1401 & Response to CA-IR-182 (Plant Additions).

In response to CA-IR-182, HELCO provided PIAs for 18 of the 21 projects set forth on HELCO-WP-1401 in excess of \$500,000. Pages 13-17 of Attachment 1 represent the PIA for Project H0000520, Hill Plant Demineralizer. The "justification" section (Attachment 1, page 15) states that the demineralizer will be both efficient and cost effective, as it will replace evaporators that have become a high maintenance item and will also reduce the need to truck-in water to satisfy make-up requirements at Hill. Please provide the following

- a. Please provide the estimated amount of the annual maintenance costs that will avoidable following installation of the demineralizer.
- b. Please provide the estimated amount of annual trucking and water supply costs that will be avoidable following installation of the demineralizer.
- c. Referring to parts (a) and (b) above, does the 2006 test year rate case forecast reflect the reductions in O&M expense? If so, how? If not, why not?

HELCO Response

- a. Information is provided in subpart b. Work that has typically taken place on the evaporators and will be avoided is semi annual (or more often) tube bundle removals for de-scaling and tube plugging which usually requires a maintenance crew a week to accomplish, cleaning of scale from the evaporator shell interior, replacement and clearing of internal water headers in the evaporator shell, evaporator blowdown line clearing of scale that plugs the line, weekly operational de-scaling procedures, contractor services to clean the tube bundles of accumulated scale, and tube bundle drip trap maintenance. The scale removal referred to is the removal of silica scale, which forms as a heavy white deposit on all evaporator interior surfaces and reduces the heat transfer characteristics across the tube bundles. It is a very tenacious and hard substance and requires a very high pressure water stream to facilitate removal without damaging the underlying metal structures. The water pressure typically

utilized is in the range of 10,000 – 15,000 pounds per square inch (psi).

- b. The estimated annual O&M cost for the evaporator/truck-in is \$345,940 as compared to the estimated annual demineralizer cost at \$47,200. See table below. (RO/EDI stands for reverse osmosis/electrolytic de-ionization.)

Evaporator (Status Quo) vs. RO/EDI Estimated O&M Cost

ESTIMATED ANNUAL COST	Estimated Evaporator Costs	Estimated RO/EDI Costs
Annual Fuel Cost	\$128,940	-
Additional Puna Operation Cost	\$92,000	-
Operations and Maintenance - Annual	\$20,000	\$23,700
Additional Water Trucking Cost	\$95,000	-
Chemical Costs	\$10,000	\$1,500
Aux Power Costs	-	\$22,000*
TOTAL ESTIMATED ANNUAL COST	\$345,940	\$47,200
*RO/EDI fuel costs included with power costs		

- c. The 2006 test year rate case forecast does not reflect the reductions in O&M expense (referred to in subpart a and b). This project is not scheduled to be complete until late 2006, and the impact of reduced O&M expenses is not expected to be realized until early 2007. Both the evaporators and the RO/EDI will be operated until the RO/EDI is proven.

CA-IR-382

Ref: HELCO-1501 & CA-IR-190 (Keahole CT-4/CT-5).

Page 6 of the response to CA-IR-190 provides monthly capital expenditures and AFUDC for Keahole CT-4 through December 1998. In August 1997, the amount of capital expenditures is "negative." Please provide the following:

- a. Please explain why the amount of capital expenditures is negative for the month of August 1997.
- b. Referring to part (a) above, please provide the amount of any identified transfer to CT-5 or other correcting entries.
- c. If not separately supplied in response to part (b) above, please provide the amount of capital expenditures that would have been charged to CT-4 but for the identified transfer or correction.

HELCO Response:

- a. In August 1997, HELCO properly made a correcting entry to transfer costs relating to a 20,000 KVA transformer from Keahole CT-4 to the System Transformer Spare project. The cost for this transformer (including transportation costs) was erroneously charged to the Keahole CT-4 project in September 1994. Therefore, the following adjustment was made:

Transformer	\$362,240
Transportation	\$ 7,779
AFUDC (10/94-8/97)	<u>\$117,870</u>
Total	<u>\$487,889</u>

- b. See response to item a. above.
- c. The amount of capital expenditures for the month of August 1997 that would have been charged to CT-4 but for the identified correction was \$294,822 (-\$193,607 + \$487,889).

CA-IR-383

Ref: HELCO-1501 & CA-IR-190 (Keahole CT-4/CT-5).

Page 7 of the response to CA-IR-190 provides monthly capital expenditures and AFUDC for Keahole CT-5 through December 1998. In August 1998, the amounts for capital expenditures and AFUDC are both "negative." Please provide the following:

- a. Please explain why capital expenditures and AFUDC are both negative for the month of August 1998.
- b. Referring to part (a) above, please provide the amount of any identified transfer to CT-4 or other correcting entries.
- c. If not separately supplied in response to part (b) above, please provide the amounts of capital expenditures and AFUDC that would have been charged to CT-5 but for the identified transfer or correction.

HELCO Response:

- a. Legal costs for Keahole CT-4 and CT-5 were accounted for in workorder #H3191182 (CT-4) and workorder #H3194182 (CT-5). In August 1998, in order to account for legal costs in one workorder, the Company transferred legal costs accounted for in workorder #H3194182 (CT-5) to workorder #H3191182 (CT-4) as follows:

Legal Costs	\$3,179,404
AFUDC	<u>\$ 619,493</u>
Total	<u>\$3,798,897</u>

It should be noted that legal costs are one of several costs that are considered "common type" costs, which have been allocated to CT-4, CT-5 and the three categories of common facilities. The calculation of the common cost allocation methodology was discussed in Exhibit VI of HELCO's Keahole CT-4 and CT-5 cost report filed on September 7, 2005 and included as HELCO-1501, pages 84 – 94.

- b. See response to item a. above.

- c. The amount of capital expenditures for the month of August 1998 that would have been charged to CT-5 but for the identified correction was \$1,174,356 (-\$2,624,541 + \$3,798,897).

CA-IR-384

Ref: HELCO-1501 & CA-IR-190 (Keahole CT-4/CT-5).

Pages 2-3 of the response to CA-IR-190 provide the cumulative balance of Keahole CT-4, CT-5 and three categories of common facilities (shop/warehouse, fire protection and waste water) by month for the period November 1998 through December 2004. Between November and December 2001, the cumulative balance for CT-4 decreased by about \$2.2 million while the balance for CT-5 increased by about \$8 million. Please provide the following:

- a. Please identify, describe and quantify the primary factors contributing to the \$2.2 million decrease in the cumulative balance of CT-4.
- b. Please identify, describe and quantify the primary factors contributing to the \$8 million increase in the cumulative balance of CT-5.

HELCO Response:

- a. The primary reason for the cost changes noted above is due to HELCO revising its allocation of the Keahole common costs. This revision and calculation of the common cost allocation methodology was discussed in Exhibit VI of HELCO's Keahole CT-4 and CT-5 cost report filed on September 7, 2005 and included as HELCO-1501, pages 84 – 94. As noted on the bottom of HELCO-1501, page 85, "All previous "common type" costs that had been allocated as reflected in HELCO's test year 2000 rate case testimony were reversed and the revised "common type" cost allocations were implemented". This revision in late 2001 resulted in the corrections as follows to Keahole CT-4, Keahole CT-5 and the three categories of common facilities:

	<u>Revision Amount</u>
Keahole CT-4	\$(2,434,718)
Keahole CT-5	\$ 7,970,520
Shop/Warehouse	\$(482,836)
Fire Protection System	\$(2,392,171)

Waste Water System

\$(2,660,795)

Total

\$ 0

- b. See response to item a. above.

CA-IR-385

Ref: HELCO-1501, pp. 4-5 (Keahole CT-4/CT-5).

Referring to the bottom of page 4, HELCO-1501 provides 11 reasons that the completed cost of CT-4 and CT-5 was two times the original cost estimate. Item 2 indicates that HELCO was unable to complete these units until 2004 "due to the extraordinary delays encountered in simultaneously obtaining the land use and air permits required to construct the combustion turbines." Please provide the following:

- a. Please explain why the word "simultaneously" was underlined in this passage.
- b. By underlying the word "simultaneously," was the statement intended to imply that extraordinary delays could, or may, have been avoided had HELCO not attempted to simultaneously obtain the land use and air permits? Please explain.
- c. Were there any actions or approaches that HELCO believes could have reasonably been undertaken in order to avoid the extraordinary delays in obtaining the land use and air permits?
 1. If the response to part (c) above is affirmative, please identify and describe each such action or approach.
 2. When did HELCO first become aware of the alternative actions or approaches identified in part (c)(1) above? Please explain.
- d. Prior to Keahole CT-4 and CT-5, had HELCO ever attempted to simultaneously obtain the land and use permits required for the construction of any other generating unit addition?
 1. If the response to part (d) is affirmative, please identify each such generating addition.
 2. If the response to part (d) is negative, please identify and describe each similar effort undertaken by HECO or MECO. If none, please so state.
- e. Please identify and describe the factors that HELCO believed could have positively contributed to successfully and timely obtaining "simultaneous" approvals of the land and air use permits for Keahole CT-4 and CT-5.

HELCO Response:

- a. The point was simply that both permits had to be held at the same time in order for the units to be installed. (This is indicated in paragraph 4, page 5, of the response.)
- b. No. It is the standard practice to proceed in parallel with critical path permits or approvals,

unless one is a precondition to another. See response to subpart d. Again, the point was simply that both permits had to be held at the same time in order for the units to be installed. See response to subpart a. It should also be noted that, because HELCO proceeded with parallel efforts to obtain land use and air permit approvals, this aided the Pre-PSD construction (which included items benefiting both the existing plant and the expansion) since those items required the land entitlement but not the final air permit. Completion of the Pre-PSD items for the improvement and safety of the existing plant operations were facilitated, and installation of CT-4 and CT-5, once PSD construction was allowed to commence, was completed sooner than it otherwise would have been.

- c. Based on the information available to HELCO at that time and then-existing circumstances, and a projection of permitting steps and timing based on similar applications by HELCO and others in the past, HELCO took prudent, reasonable and substantial measures to obtain the necessary permits and approvals for the Keahole project. (HELCO initially obtained the required land use approval in 1996, and the air permit was initially issued in 1997.) It is always possible to speculate, based on hindsight, that a different approach would somehow have avoided some of the delays that occurred. And, while hypothetical, alternate approaches or actions might have reduced the delays, such hypothetical alternative approaches or actions potentially could have caused even further delays and/or greater costs.
- d. Parallel applications and processing of land permits and the air permits are the norm for power plant projects given the long lead times for both. Generally, the processing of land entitlements are not directly affected by the processing of the air permit, and vice versa, although the construction of certain items require both to be in place. Parallel processing of such permits also provides for a more complete picture to be examined as different aspects

of the project are required to be thoroughly discussed and evaluated under the different applications, and for this to occur at the same time rather than sequentially. A recent example of this parallel effort is ongoing with HECO's current CIP Generating Station Addition project and MECO's Maalaea M-17, M-18, and M-19 project.

- e. Please see responses to parts a, b, and c above.

CA-IR-386

Ref: HELCO-1501, p. 5, & HELCO-1503 (Keahole CT-4/CT-5).

Referring to the bottom of page 5, Item 5 (i.e., of the 11 reasons that the completed cost of CT-4 and CT-5 was two times the original cost estimate) identifies substantial costs to obtain the land use approval and air permit. The additional costs include \$740,000 for the land use permit, \$1.05 million for the air permit, and \$6.7 million for project legal costs. Please provide the following:

- a. Did HELCO track the costs of the land use permit, air permit and project legal costs on a monthly basis? If not, please explain why not and how such costs can be separately identified at this time.
- b. Referring to part (a) above, please provide the monthly expenditures for each of these project cost categories (i.e., land use, air permit and legal costs).
- c. Please provide a breakdown of \$6.7 million of project legal costs by law firm and generally describe the services provided by each firm.

HELCO Response:

- a. Yes, HELCO did track the costs of the land use permit, air permit and project legal costs on a monthly basis.
- b. The information requested is attached as follows:

Land Use Permit – Pages 5 – 6

Air Permit – Pages 7 – 10

Legal-Land Use Permit/Litigation – Pages 11 - 14

Legal Services Regulatory – Pages 15 - 18

Note that when HELCO worked to provide the monthly costs for the land use permit, air permit and project legal costs, it discovered that certain line item costs in the Keahole cost report dated September 7, 2005 were classified in error. The total costs of the project remained unchanged. A reconciliation of line item costs as provided in the September 7, 2005 cost report to the corrected line item costs is provided on page 4.

- c. See response to item b. above for breakdown of project legal costs by law firm.

Legal services were provided by the following law firms:

- Dwyer Imanaka Kudo & Fujimoto/Imanaka Kudo & Fujimoto(Attorneys moved between firms) -

Lead HELCO legal counsel since 1993, for obtaining land use approval for Keahole and specifically with obtaining a Conservation District Use Amendment from the State BLNR. Provided legal advice and services in support of numerous hearings with BLNR on land use entitlement, construction deadline extensions, and the first revocable groundwater permit application, associated administrative contested cases, administrative matters with DLNR and extensive litigation (totaling approximately twenty cases) in the Third Circuit Court and Hawaii Supreme court. A general description of the Land Use Approval process with which Dwyer Imanaka/Imanaka Kudo was involved is described beginning on page 55 of HELCO-1501. Also provided legal services related to noise mitigation issues which are described beginning on page 63 of HELCO-1501. In addition, they worked with HELCO's primary legal counsel with regard to other matters involving the Keahole project such as regulatory and air permit proceedings.

- Goodsill Anderson Quinn & Stifel –

Provided legal services for all regulatory related matters relating to CT-4 and CT-5 especially dockets 7048 and 7623. Also provided legal services associated with obtaining the Air Permit (which included five public hearings), responses for the remand to the Environmental Appeals Board, and the EPA Notice of Violation for CT-4 and CT-5 pre-PSD construction as described beginning on page 59 of HELCO-1501.

- Piper Marbury -

Provided legal services associated with the appeals filed with the Environmental Appeals Board associated with the obtaining the Air Permit for CT-4 and CT-5 as described beginning on page 59 of HELCO-1501.

- Watanabe Ing -

Provided legal services, from 2003, primarily for the Third Circuit Court litigation and the Supreme Court Appeals (SC 21369, SC 22776, SC 25092, SC 25153, SC 25445, SC 25446, SC 26305, SC 26519, SC 26559, SC 27159, and SC 27276) associated with obtaining Land Use approvals and groundwater rights for CT-4 and CT-5.

- Price, Okamoto, Himeno & Lum --

Provided legal services associated with drafting and negotiating the Settlement Agreement, which is described beginning on page 67 of HELCO-1501 and, from 2003, in connection with the Third Circuit Court litigation and Supreme Court appeals.

- Oshima, Chun, Fong & Chung/Ishikawa, Morihara, Lau & Fong (Attorney's changed firms)-

Provided legal services associated with legal challenges and appeals associated with the Groundwater Permit and long-term groundwater lease for CT-4 and CT-5 from the BLNR, in addition to the transfer of part of the Keahole potable water allocation to the Department of Hawaiian Home Lands, in fulfillment of the Settlement Agreement.

Additional information on the legal challenges can be found in monthly status reports HELCO has been filing with the Commission since 1995 for CT-5 and ST-7 as required by D&O 14284 in Docket No. 7623.

Hawaii Electric Light Company, Inc.
Reconciliation Of 9/7/05 Cost Report

	<u>Legal Land Use Permitting</u>	<u>Land Use Permitting</u>	<u>Air Permitting</u>	<u>Plant Design OS Engr</u>	<u>Legal Services Regulatory</u>	<u>Msic Switchyard Equipment</u>	<u>Combustion Turbine</u>	<u>Owner Admin/ Engineering</u>	<u>HELCO Labor</u>	<u>Total</u>
Cost As Of 6/30/05 Per 9/7/05 Cost Report	6,710,782	1,454,008	1,184,086	6,843,598	233,529	41,044	20,332,649	2,134,982	753,640	39,688,318
Costs Included In Air Permitting And Deducted From Legal - Land Use Permitting In Error	257,808		(257,808)							0
Costs Included In Legal Services Regulatory And Deducted From Legal - Land Use Permitting In Error Should Be Deducted From Air Permitting	155,116		(155,116)							0
Costs Included In Legal - Land Use Permitting That Should Be Included In Legal Services Regulatory	(73,455)				73,455					0
Costs Included In Plant Design OS Engineering That Should Be Included In Land Use Permitting		680,855		(680,855)						0
Costs Included In Land Use Permitting That Should Be Included In Misc Switchyard Equipment		(50,550)				50,550				0
Costs Included In Land Use Permitting That Should Be Included In Combustion Turbines		(15,571)					15,571			0
Costs Included In Legal - Land Use Permitting That Should Be Included In Owner Admin/Engineering	(57,898)							57,898		0
Costs Included In Air Permitting And Deducted From Legal - Land Use Permitting In Error; Already Included In Legal Services Regulatory	66,932		(66,932)							0
Costs Included In Legal - Land Use Permitting That Should Be Included In Air Permitting	(751,324)		751,324							0
Costs Included In Legal Services Regulatory That Should Be Included In Other Line Items		10,473	17,092		(44,228)		6,632		10,031	0
Corrected Total Cost As Of 6/30/05	6,307,961	2,079,215	1,472,646	6,162,743	262,756	91,594	20,354,852	2,192,880	763,671	39,688,318
Change	(402,821)	625,207	288,560	(680,855)	29,227	50,550	22,203	57,898	10,031	0

Hawaii Electric Light Company Inc.
Keahole Land Use Permitting Costs
Recorded As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 5 OF 18

Month	CH2M Hill	Nakaji & Assoc	Others	Total
May-92				
& Prior	\$159,650	\$9,683		\$169,333
Jun-92	\$2,599			\$2,599
Jul-92	\$33,207			\$33,207
Aug-92	\$43,473	\$2,123		\$45,596
Sep-92	\$96,837	\$8,015	\$116	\$104,967
Oct-92	\$170,601			\$170,601
Nov-92	\$120,915	\$1,540		\$122,454
Dec-92	\$59,733			\$59,733
Jan-93		\$5,662		\$5,662
Feb-93	\$92,818	\$7,068		\$99,886
Mar-93	\$108,484	\$2,286		\$110,770
Apr-93	\$81,492	\$3,281	\$4,208	\$88,982
May-93	\$41,382	\$834		\$42,216
Jun-93	\$64,543	\$906		\$65,450
Jul-93	\$52,909			\$52,909
Aug-93	-\$126,982			-\$126,982
Sep-93	\$64,782	\$5,551		\$70,333
Oct-93	\$42,929			\$42,929
Nov-93	\$64,733			\$64,733
Dec-93	\$101,638			\$101,638
Jan-94	\$46,984	\$2,404		\$49,387
Feb-94	\$45,316	\$4,534	\$351	\$50,201
Mar-94	\$23,344	\$4,523	\$1,495	\$29,362
Apr-94	\$19,818	\$3,706	\$1,450	\$24,975
May-94	\$32,353		\$1,760	\$34,114
Jun-94	\$30,303		\$1,444	\$31,746
Jul-94	\$21,630		\$1,201	\$22,831
Aug-94	\$29,264		\$1,667	\$30,931
Sep-94	\$12,385		\$1,586	\$13,970
Oct-94	\$8,473		\$1,867	\$10,340
Nov-94	\$6,363	\$3,066	\$1,466	\$10,895
Dec-94	\$6,017		\$2,443	\$8,460
Jan-95	\$2,957			\$2,957
Feb-95	\$2,771			\$2,771
Mar-95	\$2,189			\$2,189
Apr-95	\$4,394		\$873	\$5,267
May-95	\$2,084			\$2,084
Jun-95	\$22,361			\$22,361
Jul-95	\$5,076			\$5,076
Aug-95	\$25,327			\$25,327
Sep-95	\$6,481			\$6,481
Oct-95	\$21,118			\$21,118
Nov-95	\$28,485			\$28,485
Dec-95	\$68,156		\$265	\$68,421
Jan-96	\$41,925			\$41,925
Feb-96	\$27,089			\$27,089
Mar-96	\$6,665			\$6,665
Apr-96	\$1,013			\$1,013
May-96				\$0
Jun-96				\$0

Hawaii Electric Light Company Inc.
Keahole Land Use Permitting Costs
Recorded As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 6 OF 18

Month	CH2M Hill	Nakaji & Assoc	Others	Total
Jul-96	\$2,884			\$2,884
Aug-96	\$1,522			\$1,522
Sep-96	\$1,864			\$1,864
Oct-96				\$0
Nov-96				\$0
Dec-96				\$0
Jan-97				\$0
Feb-97	\$5,190			\$5,190
Mar-97	\$9,372			\$9,372
Apr-97				\$0
May-97				\$0
Jun-97				\$0
Jul-97	\$3,595			\$3,595
Aug-97	\$6,866			\$6,866
Sep-97	\$4,251			\$4,251
Oct-97	\$6,798			\$6,798
Nov-97	\$5,645			\$5,645
Dec-97	\$1,870			\$1,870
Jan-98	\$9,001			\$9,001
Feb-98	\$4,085			\$4,085
Mar-98				\$0
Apr-98	\$2,967			\$2,967
May-98	\$2,138			\$2,138
Jun-98	\$2,974			\$2,974
Jul-98	\$3,488			\$3,488
Aug-98				\$0
Sep-98	\$4,679			\$4,679
Oct-98	\$2,428			\$2,428
Nov-98				\$0
Dec-98	\$8,515			\$8,515
Jan-99				\$0
Feb-99	\$8,159			\$8,159
Mar-99	\$8,811			\$8,811
Apr-99	\$7,094			\$7,094
May-99	\$3,408			\$3,408
Jun-99	\$2,275			\$2,275
Jul-99	\$9,750			\$9,750
Aug-99				\$0
Sep-99	\$5,318			\$5,318
Oct-99				\$0
Nov-99	\$1,840			\$1,840
Dec-99	\$4,737			\$4,737
Jan-00	\$2,512			\$2,512
Feb-00	\$844			\$844
Mar-00	\$6,380			\$6,380
Apr-00	\$1,239			\$1,239
May-00	\$1,850			\$1,850
Jun-00	\$934			\$934
				\$0
				\$0
TOTAL	\$1,981,367	\$65,183	\$22,192	\$2,068,742

Hawaii Electric Light Company Inc.
Keahole Air Permitting Costs
As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 7 OF 18

Month	HECO	Goodsill	Piper	Others	Total
Apr-92				\$844	\$844
May-92					\$0
Jun-92					\$0
Jul-92					\$0
Aug-92					\$0
Sep-92					\$0
Oct-92					\$0
Nov-92					\$0
Dec-92				\$10	\$10
Jan-93					\$0
Feb-93					\$0
Mar-93					\$0
Apr-93					\$0
May-93					\$0
Jun-93					\$0
Jul-93					\$0
Aug-93					\$0
Sep-93					\$0
Oct-93		\$2,949.43			\$2,949
Nov-93					\$0
Dec-93					\$0
Jan-94					\$0
Feb-94					\$0
Mar-94		\$16,823.95			\$16,824
Apr-94					\$0
May-94					\$0
Jun-94		\$1,472.70			\$1,473
Jul-94		\$3,358.18			\$3,358
Aug-94					\$0
Sep-94				\$562	\$562
Oct-94					\$0
Nov-94					\$0
Dec-94					\$0
Jan-95					\$0
Feb-95					\$0
Mar-95					\$0
Apr-95					\$0
May-95					\$0
Jun-95					\$0
Jul-95					\$0
Aug-95					\$0
Sep-95					\$0
Oct-95					\$0
Nov-95				\$245	\$245
Dec-95				\$5,423	\$5,423
Jan-96				\$832	\$832
Feb-96					\$0
Mar-96					\$0
Apr-96					\$0
May-96					\$0
Jun-96					\$0

Hawaii Electric Light Company Inc.
Keahole Air Permitting Costs
As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 8 OF 18

Month	HECO	Goodsill	Piper	Others	Total
Jul-96					\$0
Aug-96					\$0
Sep-96					\$0
Oct-96					\$0
Nov-96					\$0
Dec-96					\$0
Jan-97					\$0
Feb-97					\$0
Mar-97					\$0
Apr-97					\$0
May-97					\$0
Jun-97					\$0
Jul-97					\$0
Aug-97					\$0
Sep-97					\$0
Oct-97					\$0
Nov-97					\$0
Dec-97					\$0
Jan-98					\$0
Feb-98					\$0
Mar-98					\$0
Apr-98				\$841	\$841
May-98					\$0
Jun-98					\$0
Jul-98					\$0
Aug-98					\$0
Sep-98					\$0
Oct-98					\$0
Nov-98					\$0
Dec-98					\$0
Jan-99					\$0
Feb-99	\$20,408	\$1,707.52			\$22,116
Mar-99	\$30,004	\$4,330.89			\$34,335
Apr-99	\$18,006	\$4,193.82			\$22,200
May-99	\$39,550	\$1,071.81			\$40,622
Jun-99	\$37,124	\$2,314.61			\$39,438
Jul-99	\$12,912	\$12,044.35			\$24,956
Aug-99	\$45,217	\$4,736.09			\$49,953
Sep-99	\$75,377	\$27,278.85			\$102,656
Oct-99	\$8,918	\$7,755.41			\$16,674
Nov-99	\$541	\$3,289.59			\$3,831
Dec-99	\$7,844				\$7,844
Jan-00	\$76,959	\$10,833.49			\$87,793
Feb-00	\$13,825				\$13,825
Mar-00	\$40,502				\$40,502
Apr-00	\$13,763				\$13,763
May-00	\$20,676	\$9,168		\$5,731	\$35,576
Jun-00	\$34,285		\$14,406		\$48,691
Jul-00		\$1,569			\$1,569
Aug-00	\$8,998				\$8,998
Sep-00	-\$3,414	\$961	\$6,955		\$4,502

Hawaii Electric Light Company Inc.
Keahole Air Permitting Costs
As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 9 OF 18

Month	HECO	Goodsill	Piper	Others	Total
Oct-00	\$70,641	\$3,111			\$73,751
Nov-00	\$15,100	\$4,025	\$7,029		\$26,154
Dec-00	\$53,728	\$5,215	\$8,651		\$67,594
Jan-01	\$9,004				\$9,004
Feb-01	\$20,807	\$2,210	\$4,204		\$27,221
Mar-01	\$2,613		\$2,069	\$485	\$5,167
Apr-01	\$26,510	\$1,359		\$1,176	\$29,046
May-01	\$6,554	\$2,742	\$308		\$9,604
Jun-01	\$30,265	\$940	\$1,812		\$33,017
Jul-01	\$59,297		\$213		\$59,510
Aug-01	\$3,455	\$6,352	\$428	\$12	\$10,247
Sep-01	\$18,148		\$85		\$18,234
Oct-01	\$10,041	\$2,591	\$1,045		\$13,677
Nov-01	\$7,395	\$878	\$9,997		\$18,270
Dec-01	\$29,275	\$9,417	\$69,426		\$108,117
Jan-02	\$19,032				\$19,032
Feb-02	\$5,133	\$3,849	\$17,695		\$26,677
Mar-02	\$20,081	\$757			\$20,838
Apr-02	\$2,426		\$13,376		\$15,802
May-02	\$10,603	\$201			\$10,804
Jun-02	\$18,701			\$86	\$18,786
Jul-02	\$7,513	\$230			\$7,743
Aug-02	\$5,195	\$75	\$452		\$5,722
Sep-02	\$3,891				\$3,891
Oct-02	\$4,743				\$4,743
Nov-02	\$3,286				\$3,286
Dec-02	\$394				\$394
Jan-03	\$694				\$694
Feb-03	\$1,765				\$1,765
Mar-03	\$1,060				\$1,060
Apr-03	\$3,292		\$12,344		\$15,636
May-03	\$2,689	\$469			\$3,157
Jun-03	\$2,795	\$1,812	\$6,286		\$10,893
Jul-03	\$888	\$2,775	\$3,626		\$7,289
Aug-03	\$1,271				\$1,271
Sep-03	\$1,689			\$2,035	\$3,724
Oct-03	\$977	\$4,236	\$1,932	\$4,164	\$11,309
Nov-03		\$4,188	\$7,826		\$12,014
Dec-03	\$2,740		\$5,515	\$21,960	\$30,214.40
Jan-04	\$7,339				\$7,339
Feb-04	\$8,589	\$66	\$1,116	\$323	\$10,094
Mar-04	\$8,241				\$8,241
Apr-04	\$8,684				\$8,684
May-04	\$6,981				\$6,981
Jun-04	\$5,668				\$5,668
Jul-04	\$3,997				\$3,997
Aug-04	\$1,338				\$1,338
Sep-04					\$0
Oct-04	\$1,147	\$921			\$2,068
Nov-04	\$1,547				\$1,547
Dec-04	\$1,000				\$1,000

Hawaii Electric Light Company Inc.
Keahole Air Permitting Costs
As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 10 OF 18

Month	HECO	Goodsill	Piper	Others	Total
Jan-05	\$34				\$34
Feb-05					\$0
Mar-05					\$0
Apr-05					\$0
May-05					\$0
Jun-05					\$0
TOTAL	\$1,039,753	\$174,277	\$196,796	\$44,728	\$1,455,554

Hawaii Electric Light Company Inc.
Keahole Legal - Land Use Costs
Recorded As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 11 OF PAGE 18

Month	Dwyer	Price	Watanabe	Total
Apr-92	\$4,208			\$4,208
May-92	\$0			\$0
Jun-92	\$0			\$0
Jul-92	\$0			\$0
Aug-92	\$0			\$0
Sep-92	\$0			\$0
Oct-92	\$0			\$0
Nov-92	\$0			\$0
Dec-92	\$0			\$0
Jan-93	\$0			\$0
Feb-93	\$0			\$0
Mar-93	\$0			\$0
Apr-93	\$4,208	\$40,022		\$44,231
May-93	\$4,159			\$4,159
Jun-93	\$1,333	\$21,713		\$23,047
Jul-93	\$2,157			\$2,157
Aug-93	\$0	\$8,292		\$8,292
Sep-93	\$20,941			\$20,941
Oct-93	\$0	\$11,789		\$11,789
Nov-93	\$9,648	\$51,760		\$61,408
Dec-93	\$13,650	\$5,687		\$19,337
Jan-94	\$17,458	\$23,832		\$41,290
Feb-94	\$0	\$12,203		\$12,203
Mar-94	\$81,190	\$12,587		\$93,776
Apr-94	\$62,444	\$10,300		\$72,743
May-94	\$95,800	\$1,015		\$96,815
Jun-94	\$92,270	\$3,893		\$96,163
Jul-94	\$71,789			\$71,789
Aug-94	\$37,239	\$12,135		\$49,373
Sep-94	\$58,621	\$32,701		\$91,323
Oct-94	\$51,529	\$17,150		\$68,678
Nov-94	\$70,694			\$70,694
Dec-94	\$67,492	\$28,503		\$95,995
Jan-95	\$31,113			\$31,113
Feb-95	\$34,132			\$34,132
Mar-95	\$28,553	\$5,889		\$34,442
Apr-95	\$57,322			\$57,322
May-95	\$29,603			\$29,603
Jun-95	\$3,889			\$3,889
Jul-95	\$41,604			\$41,604
Aug-95	\$55,969			\$55,969
Sep-95	\$105,584			\$105,584
Oct-95	\$73,547			\$73,547
Nov-95	\$120,765			\$120,765
Dec-95	\$321,704			\$321,704
Jan-96	\$79,885			\$79,885
Feb-96	\$84,590			\$84,590
Mar-96	\$21,332			\$21,332
Apr-96	\$70,921			\$70,921
May-96	\$54,022			\$54,022
Jun-96	\$66,276			\$66,276

Hawaii Electric Light Company Inc.
Keahole Legal - Land Use Costs
Recorded As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 12 OF PAGE 18

Month	Dwyer	Price	Watanabe	Total
Jul-96	-\$2,884			-\$2,884
Aug-96	\$100,859			\$100,859
Sep-96	\$50,931			\$50,931
Oct-96	\$53,893			\$53,893
Nov-96	\$43,821			\$43,821
Dec-96	\$11,874			\$11,874
Jan-97	\$8,115			\$8,115
Feb-97	\$25,164			\$25,164
Mar-97	\$20,759			\$20,759
Apr-97	\$31,986			\$31,986
May-97	\$8,920			\$8,920
Jun-97	\$11,567			\$11,567
Jul-97	\$33,872			\$33,872
Aug-97	\$26,976			\$26,976
Sep-97	\$27,553			\$27,553
Oct-97	\$16,330			\$16,330
Nov-97	\$19,292			\$19,292
Dec-97	\$32,452			\$32,452
Jan-98	\$40,754			\$40,754
Feb-98	\$27,902			\$27,902
Mar-98	\$66,404			\$66,404
Apr-98	-\$12,629			-\$12,629
May-98	-\$2,138			-\$2,138
Jun-98	\$260,615			\$260,615
Jul-98	\$95,484			\$95,484
Aug-98	\$0			\$0
Sep-98	-\$4,679			-\$4,679
Oct-98	\$0			\$0
Nov-98	-\$2,428			-\$2,428
Dec-98	-\$8,515			-\$8,515
Jan-99	\$199,763			\$199,763
Feb-99	\$50,664			\$50,664
Mar-99	\$54,288			\$54,288
Apr-99	\$138,123			\$138,123
May-99	\$186,671			\$186,671
Jun-99	\$83,653			\$83,653
Jul-99	-\$9,750			-\$9,750
Aug-99	\$55,690			\$55,690
Sep-99	-\$5,318			-\$5,318
Oct-99	\$86,674		\$2,748	\$89,422
Nov-99	-\$505			-\$505
Dec-99	-\$4,737			-\$4,737
Jan-00	\$97,413			\$97,413
Feb-00	-\$844		\$5,796	\$4,952
Mar-00	\$86,437			\$86,437
Apr-00	-\$8,364			-\$8,364
May-00	-\$1,850		\$141	-\$1,710
Jun-00	\$7,958			\$7,958
Jul-00	\$0			\$0
Aug-00	\$0			\$0
Sep-00	\$0			\$0

Hawaii Electric Light Company Inc.
Keahole Legal - Land Use Costs
Recorded As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 13 OF PAGE 18

Month	Dwyer	Price	Watanabe	Total
Oct-00	\$0		\$5,315	\$5,315
Nov-00	\$0			\$0
Dec-00	\$0		\$586	\$586
Jan-01	\$0			\$0
Feb-01	\$0		\$70	\$70
Mar-01	\$0			\$0
Apr-01	\$1,182			\$1,182
May-01	\$40,726		\$422	\$41,148
Jun-01	\$48,631		\$9,289	\$57,921
Jul-01	\$55,406			\$55,406
Aug-01	\$13,249		\$19,395	\$32,644
Sep-01	\$0			\$0
Oct-01	\$163,178		\$27,096	\$190,274
Nov-01	\$84,303		\$602	\$84,905
Dec-01	\$74,909		\$516	\$75,424
Jan-02	\$0			\$0
Feb-02	\$0		\$4,371	\$4,371
Mar-02	\$54,972			\$54,972
Apr-02	\$24,027		\$211	\$24,238
May-02	\$0			\$0
Jun-02	\$0			\$0
Jul-02	\$36,605		\$5,127	\$41,732
Aug-02	\$34,354		\$469	\$34,823
Sep-02	\$19,425		\$1,211	\$20,636
Oct-02	\$64,972			\$64,972
Nov-02	\$110,926		\$18,502	\$129,428
Dec-02	\$71,711		\$12,982	\$84,693
Jan-03	\$82,469		\$13,648	\$96,117
Feb-03	\$0		\$9,708	\$9,708
Mar-03	\$46,989			\$46,989
Apr-03	\$68,426		\$56,557	\$124,983
May-03	\$12,515		\$13,993	\$26,508
Jun-03	\$6,615		\$488	\$7,102
Jul-03	\$0		\$10,429	\$10,429
Aug-03	\$14,497		\$7,479	\$21,976
Sep-03	\$0			\$0
Oct-03	\$54,683		\$22,970	\$77,653
Nov-03	\$56,145		\$34,011	\$90,156
Dec-03	\$13,544			\$13,544
Jan-04	\$3,481		\$17,415	\$20,896
Feb-04	\$0		\$4,399	\$4,399
Mar-04	\$9,677		\$14,300	\$23,976
Apr-04	\$0		\$17,845	\$17,845
May-04	\$11,281			\$11,281
Jun-04	\$0			\$0
Jul-04	\$9,434		\$2,462	\$11,896
Aug-04	\$0		\$19,952	\$19,952
Sep-04	\$27,129		\$12,657	\$39,786
Oct-04	\$0			\$0
Nov-04	\$87,183		\$25,045	\$112,228
Dec-04	\$72,929			\$72,929

Hawaii Electric Light Company Inc.
Keahole Legal - Land Use Costs
Recorded As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 14 OF PAGE 18

Month	Dwyer	Price	Watanabe	Total
Jan-05	\$54,020			\$54,020
Feb-05	\$0		\$14,322	\$14,322
Mar-05	\$42,007		\$4,833	\$46,840
Apr-05	\$0			\$0
May-05	\$0		-\$26,327	-\$26,327
Jun-05	\$0			\$0
TOTAL	\$5,617,460	\$299,471	\$391,031	\$6,307,961

Hawaii Electric Light Company, Inc.
Legal Services Regulatory Costs
As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 15 OF PAGE 18

Month	Goodsill	Goodsill	Total
Apr-92	\$234.38		\$234
May-92			\$0
Jun-92			\$0
Jul-92	\$3,565.11		\$3,565
Aug-92			\$0
Sep-92			\$0
Oct-92	\$6,270.44		\$6,270
Nov-92			\$0
Dec-92			\$0
Jan-93			\$0
Feb-93			\$0
Mar-93			\$0
Apr-93			\$0
May-93			\$0
Jun-93			\$0
Jul-93	\$24,431.72		\$24,432
Aug-93			\$0
Sep-93			\$0
Oct-93			\$0
Nov-93			\$0
Dec-93			\$0
Jan-94			\$0
Feb-94			\$0
Mar-94			\$0
Apr-94			\$0
May-94	\$2,285.23		\$2,285
Jun-94			\$0
Jul-94			\$0
Aug-94	\$22,470.69		\$22,471
Sep-94			\$0
Oct-94	\$8,130.25		\$8,130
Nov-94			\$0
Dec-94			\$0
Jan-95			\$0
Feb-95			\$0
Mar-95			\$0
Apr-95			\$0
May-95		\$208.34	\$208
Jun-95			\$0
Jul-95		\$541.68	\$542
Aug-95		\$625.02	\$625
Sep-95			\$0
Oct-95		\$104.17	\$104
Nov-95		\$7,368.22	\$7,368
Dec-95		\$25,691.06	\$25,691
Jan-96		\$6,654.13	\$6,654
Feb-96		\$6,896.04	\$6,896
Mar-96		\$11,152.42	\$11,152
Apr-96		\$7,018.84	\$7,019
May-96		\$5,119.01	\$5,119
Jun-96		\$240.61	\$241

Hawaii Electric Light Company, Inc.
Legal Services Regulatory Costs
As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 16 OF PAGE 18

Month	Goodsill	Goodsill	Total
Jul-96		\$3,955.08	\$3,955
Aug-96		\$836.79	\$837
Sep-96		\$3,271.57	\$3,272
Oct-96		\$975.28	\$975
Nov-96		\$1,532.66	\$1,533
Dec-96		\$20,501.29	\$20,501
Jan-97		\$569.54	\$570
Feb-97		\$7,780.67	\$7,781
Mar-97		\$3,286.49	\$3,286
Apr-97		\$5,368.07	\$5,368
May-97			\$0
Jun-97			\$0
Jul-97		\$1,834.85	\$1,835
Aug-97		\$196.86	\$197
Sep-97			\$0
Oct-97			\$0
Nov-97		\$481.22	\$481
Dec-97			\$0
Jan-98		\$5,374.80	\$5,375
Feb-98		\$7,870.33	\$7,870
Mar-98		\$8,925.44	\$8,925
Apr-98		\$7,145.98	\$7,146
May-98		\$2,496.04	\$2,496
Jun-98		\$1,093.68	\$1,094
Jul-98			\$0
Aug-98			\$0
Sep-98			\$0
Oct-98			\$0
Nov-98			\$0
Dec-98			\$0
Jan-99			\$0
Feb-99			\$0
Mar-99			\$0
Apr-99			\$0
May-99			\$0
Jun-99			\$0
Jul-99			\$0
Aug-99			\$0
Sep-99			\$0
Oct-99			\$0
Nov-99			\$0
Dec-99			\$0
Jan-00			\$0
Feb-00			\$0
Mar-00			\$0
Apr-00			\$0
May-00	\$749.95		\$750
Jun-00			\$0
Jul-00	\$70.31		\$70
Aug-00			\$0
Sep-00	\$93.74		\$94

Hawaii Electric Light Company, Inc.
Legal Services Regulatory Costs
As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 17 OF PAGE 18

Month	Goodsill	Goodsill	Total
Oct-00			\$0
Nov-00	\$1,775.96		\$1,776
Dec-00			\$0
Jan-01			\$0
Feb-01	\$70.31		\$70
Mar-01	\$117.18		\$117
Apr-01			\$0
May-01	\$1,453.03		\$1,453
Jun-01			\$0
Jul-01	\$117.18		\$117
Aug-01			\$0
Sep-01	\$468.72		\$469
Oct-01	\$304.67		\$305
Nov-01	\$1,570.21		\$1,570
Dec-01	\$2,273.30		\$2,273
Jan-02			\$0
Feb-02	\$938.84		\$939
Mar-02			\$0
Apr-02	\$304.67		\$305
May-02	\$46.87		\$47
Jun-02	\$78.12		\$78
Jul-02	\$7,476.08		\$7,476
Aug-02	\$2,601.40		\$2,601
Sep-02			\$0
Oct-02			\$0
Nov-02	\$2,476.41		\$2,476
Dec-02	\$140.62		\$141
Jan-03			\$0
Feb-03	\$1,945.19		\$1,945
Mar-03	\$46.87		\$47
Apr-03	\$46.87		\$47
May-03	\$867.13		\$867
Jun-03	\$4,360.14		\$4,360
Jul-03	\$216.65		\$217
Aug-03	\$81.24		\$81
Sep-03			\$0
Oct-03	\$704.12		\$704
Nov-03	\$704.12		\$704
Dec-03			\$0.00
Jan-04			\$0
Feb-04	\$3,845.59		\$3,846
Mar-04			\$0
Apr-04	\$1,841.55		\$1,842
May-04			\$0
Jun-04	\$189.57		\$190
Jul-04	\$135.41		\$135
Aug-04			\$0
Sep-04			\$0
Oct-04			\$0
Nov-04	\$379.14		\$379
Dec-04			\$0

Hawaii Electric Light Company, Inc.
Legal Services Regulatory Costs
As Of 6/30/05

CA-IR-386
DOCKET NO. 05-0315
PAGE 18 OF PAGE 18

Month	Goodsill	Goodsill	Total
Jan-05	\$81.24		\$81
Feb-05			\$0
Mar-05			\$0
Apr-05	\$1,083.86		\$1,084
May-05	\$596		\$596
Jun-05			\$0
TOTAL	\$107,640	\$155,116	\$262,756

CA-IR-387

Ref: HELCO Response to CA-IR-223, page 7 and pages 28-46, Customer Costs.

The summary of "Relative Customer Costs by Phase" contains comparable cost data for transformers, service drops and meters. Please explain how these values were estimated and indicate whether any of the amounts stated are other than HELCO 2006 amounts.

HELCO Response:

These values were estimated by HELCO personnel who made the estimates based on generic installations appropriate for the rate schedule and service phase. These estimates were made in 2006 based on the costs that they would use for an actual installation of that type.

CA-IR-388

Ref: HELCO Response to CA-IR-223, pages 9-16 and 19-26, Accounting Data for Functionalizations.

These pages summarize the Company's functionalization of various accounting inputs, apparently based upon recorded information. Please confirm that test year actual data, after all ratemaking adjustments, was used or provide explanations for exceptions to the use of test year adjusted amounts, with references into HELCO Exhibits/Workpapers for the input values used on these pages.

HELCO Response:

Yes, the referenced functionalizations are based on actual test year rate base and expense values.

CA-IR-389

Ref: HELCO-206 vs. Monthly PUC Reports; Customer Forecast.

At HELCO-206, the test year forecasted number of Schedule R Residential customers was 61,373, while at June of 2006 HELCO reported an actual number of customers of 61,454 (plus another 458 employees on Schedule E). Please provide the following information:

- a. Explain any issues with respect to the validity of comparing these two values, since the HELCO-206 value is an average for the entire year 2006, while as of June (the mid-point of 2006) actual customer counts appear to be above the forecast.
- b. State all reasons why/if HELCO objects to an upward adjustment of the residential customer count and sales volumes to recognize the favorable actual versus forecast variance as of June 2006 or at some later date.

HELCO Response:

- a. Comparing the HELCO-206 residential customer count, which is an average for the entire year 2006, with the June 2006 actual customer count, which is a number from one point in time, is not a useful comparison as it is comparing apples and oranges. A more useful comparison would be a comparison of the HELCO-206 average residential customer count with 12 month average ending with the month of June 2006.
- b. If the question is whether HELCO objects to the Consumer Advocate proposing an upward adjustment of the residential customer count, HELCO does not object to the Consumer Advocate proposing what the Consumer Advocate believes is appropriate. HELCO will give every consideration to what the Consumer Advocate proposes. However, HELCO will oppose the Consumer Advocate's proposed adjustment if HELCO does not agree with the proposed adjustment. If the question is whether HELCO intends to update its test year customer counts and energy sales to reflect recorded year to date 2006 customer and energy sales amounts in its rebuttal testimony, HELCO does not intend to update its test year customer count and energy sales test year estimates in its rebuttal testimony at this time. If the question is whether HELCO

is willing to discuss a stipulated agreement for customer count for the residential customer count and energy sales, HELCO is willing to discuss a stipulated agreement for the customer count and energy sales for all rate schedules and in total. Recorded year-to-date customer counts and energy sales may not be appropriate for ratemaking purposes due to abnormal events and/or circumstances. For example, for ratemaking purposes, energy sales could be weather-normalized to reflect lower/higher than normal cooling-degree-days.

CA-IR-390

Ref: HELCO-206 vs. Monthly PUC Reports; Customer Forecast.

At HELCO-206, the test year forecasted number of Schedule G/J Commercial customers was 12,348, while at June of 2006 HELCO reported an actual number of customers of 12,723. Please provide the following information:

- a. Explain any issues with respect to the validity of comparing these two values, since the HELCO-206 value is an average for the entire year 2006, while as of June (the mid-point of 2006) actual customer counts appear to be significantly above the forecast.
- b. State all reasons why/if HELCO objects to an upward adjustment of the commercial customer count and sales volumes to recognize the favorable actual versus forecast variance as of June 2006 or at some later date.

HELCO Response:

- a. Comparing the HELCO-206 commercial customer count, which is an average for the entire year 2006, with the June 2006 actual customer count, which is a number from one point in time, is not a useful comparison as it is comparing apples and oranges. A more useful comparison would be a comparison of the HELCO-206 average commercial customer count with 12 month average ending with the month of June 2006.
- b. If the question is whether HELCO objects to the Consumer Advocate proposing an upward adjustment of the commercial customer count, HELCO does not object to the Consumer Advocate proposing what the Consumer Advocate believes is appropriate. HELCO will give every consideration to what the Consumer Advocate proposes. However, HELCO will oppose the Consumer Advocate's proposed adjustment if HELCO does not agree with the proposed adjustment. If the question is whether HELCO intends to update its test year customer counts and energy sales to reflect recorded year to date 2006 customer and energy sales amounts in its rebuttal testimony, HELCO does not intend to update its test year customer count and energy sales test year estimates in its rebuttal testimony at this time. If the question is whether HELCO

is willing to discuss a stipulated agreement for customer count for the commercial customer count and energy sales, HELCO is willing to discuss a stipulated agreement for the customer count and energy sales for all rate schedules and in total. Recorded year-to-date customer counts and energy sales may not be appropriate for ratemaking purposes due to abnormal events and/or circumstances. For example, for ratemaking purposes, energy sales could be weather-normalized to reflect lower/higher than normal cooling-degree-days.